Subject:	Call w/Dave Massaron and Amanda Van Dusen re EPA issues/DWSD
Location:	1-888-[redacted]
Start:	Thu 1/2/2014 2:00 PM
End:	Thu 1/2/2014 3:00 PM
Recurrence:	(none)
Organizer:	Brader, Valerie (GOV)

Subject: RDS/DM/BM/NL/DW - Conference call with Senator Ananich
Location: By Phone 888-[redacted]

Start: Mon 9/28/2015 12:00 PM
End: Mon 9/28/2015 12:30 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: GovCalendar
Required Attendees: Thelen, Mary Beth (DEQ); Mcbride, Bill (GOV); Muchmore, Dennis (GOV); Lyon, Nick (DCH); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH); Wyant, Dan (DEQ)

Purpose: Flint water

Senator Ananich and COS Andy Leavitt

RDS to call: 888-[redacted]

Different # than the 11:30 am Call
888-[redacted]
ACCESS CODE: [redacted]
HOST PASSWORD: [redacted]– DM to dial in as host

POC: Michelle Carnevale MCarnevale@senate.michigan.gov

Subject: RDS/DM/BM/NL/DW/Maggie Pallone/Karen Tommasulo/Col. Etue & Lt. Col. Sands/HH/DMurray/TSaxton - Meeting Re: Flint Water
Location: Governor's Conference Room, Romney

Start: Tue 9/29/2015 12:00 PM
End: Tue 9/29/2015 12:30 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: GovCalendar
Required Attendees: Mcbride, Bill (GOV); Wisniewski, Wendy (GOV); Muchmore, Dennis (GOV); Lyon, Nick (DCH); Grijalva, Nancy (DCH); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Etue, Kriste (MSP); Klotz, Josephine (MSP); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Hansen, Rachel (GOV); Murray, David (GOV); Adamczyk, Lynne (GOV); Sands, Thomas (MSP)
Optional Attendees: Clement, Elizabeth (GOV); Agen, Jarrod (GOV)

(888) [redacted]

HH by Phone
888-[redacted]
[redacted]
Host: [redacted]– RH to dial in as host

From: Hollins, Harvey (GOV)
Sent: Wednesday, February 11, 2015 12:27 PM
To: Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Wisniewski, Wendy (GOV); Workman, Wayne (TREASURY)
Subject: Re: Flint water

Why did the rates go up after the connection to the Flint river?

Best,
Harvey

On Feb 11, 2015, at 12:21 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

> Dennis – the attached pdf is the memo & table that hopefully addresses some of the info needs stemming from the meeting with the pastors last week. Jerry A. has looked at this document as well. In terms of key items at this point (that are mentioned in the memo)….
>
> KWA may be hooked up by the end of this calendar year; weather permitting, etc. Even allowing for some slippage that is positive news
>
> Whether you hooked to DWSD thru the county or directly; it is a $1mm add'l impact to the budget… an add'l 30% increase in rates over existing
>
> They have $2mm already baked in the budget to fix that two mile 'bad' section of pipeline that might address a good portion of the current issues
>
> They now have an outside consultant on the ground who is suppose to provide some preliminary indications next week to help improve the situation
>
> Don't forget about the $2mm SRF loan restructuring (which we have not officially put on the table). Those $s would be available for more system improvements.
>
> Again, sorry this took as long as it did. Let us know if this is what you had in mind or if you need anything else. Wayne – chime in if I missed anything.
>
> See you @ 1:30
>
> <FlintWater.pdf>

From: Muchmore, Dennis (GOV)
Sent: Thursday, July 30, 2015 9:43 AM
To: Wurfel, Brad (DEQ)
Cc: Clement, Elizabeth (GOV); Hollins, Harvey (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: Flint Water Meeting

Can you join us with some Flint community leaders on Tuesday at 9:30 to talk about these water quality issues (probably need to bring your science guy)? Tom and Wayne will be there and Harvey and I promised these pastors we'd have real information for them and we do.

From: Grijalva, Nancy (DCH)
Sent: Thursday, September 24, 2015 12:58 PM
To: Wisniewski, Wendy (GOV)
Subject: FW: Hurley Hospital's bulletin regarding Flint water

FYI..... so ????

From: Lasher, Geralyn (DCH)
Sent: Thursday, September 24, 2015 12:27 PM
To: Lyon, Nick (DCH); Grijalva, Nancy (DCH); Becker, Timothy (DCH); Minicuci, Angela (DCH); Eisner, Jennifer (DCH); Hertel, Elizabeth (DCH); Robinson, Mikelle (DCH); Moran, Susan (DCH)
Subject: FW: Hurley Hospital's bulletin regarding Flint water

Mikelle has been told the Genesee Health Department will also be at the press conference today in Flint with the below groups. They have put together a fact sheet on lead and water that they will be sending us this afternoon.

Angela and I have just gotten off the phone with Nancy Peeler and Bob Scott and are putting together talking points about this "study" that the physicians will be discussing that claims an increase in EBL in children since the change to the water system source.

DEQ will be answering the questions as to why the city cannot just switch back to the Detroit system and how that won't solve the problem. We will answer the health questions.

The City of Flint is also issuing a water advisory today to educate residents and has also asked the Governor for $30 million. http://www.mlive.com/news/flint/index.ssf/2015/09/flint_will_issue_lead_advisory.html#incart_m-rpt-2

From: Murray, David (GOV)
Sent: Thursday, September 24, 2015 11:47 AM
To: Lasher, Geralyn (DCH) <lasherg@michigan.gov>; Minicuci, Angela (DCH) <MinicuciA@michigan.gov>; Eisner, Jennifer (DCH) <EisnerJ@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Hurley Hospital's bulletin regarding Flint water

Team,

Here's the media bulletin issued by Hurley Hospital in Flint about the lead blood levels press conference this afternoon. I've reached out to Hurley's communications team, which has promised to send me whatever it has shared with the media on an embargoed basis. I'll forward that as soon as I receive it.

Dave

HURLEY
MEDICAL CENTER

Contact: Rebecca Jensen
[redacted]
September 24, 2015

Media Alert

FOR IMMEDIATE RELEASE

WHO: **Genesee County Medical Community**, including Hurley Medical Center, Greater Flint Health Coalition, Mott Children's Health Center, Hamilton Community Health Network & Genesee County Medical Society

WHAT: Press conference to address medical community's concerns regarding lead levels in the city of Flint's water supply and appropriate precautionary measures.

WHEN: **3pm, Today, September 24th, 2015**

WHERE: Hurley Medical Center, Charles White Conference Center

Media Note: Please enter on the Sixth Avenue entrance and check in with front desk upon arrival to be escorted to the Charles White Conference Center.

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

HURLEY
MEDICAL CENTER

HURLEY
MEDICAL CENTER

From: Grijalva, Nancy (DCH)
Sent: Thursday, September 24, 2015 1:16 PM
To: Wisniewski, Wendy (GOV)
Subject: RE: Hurley Hospital's bulletin regarding Flint water

No, I sent you the tp --we can have Lasher join the call -- nick is in Tribal summit too... unless you schedule for after the summit..

From: Wisniewski, Wendy (GOV)
Sent: Thursday, September 24, 2015 1:12 PM
To: Grijalva, Nancy (DCH)
Subject: RE: Hurley Hospital's bulletin regarding Flint water

Can't answer any questions because I don't know anything about this.

From: Grijalva, Nancy (DCH)
Sent: Thursday, September 24, 2015 12:58 PM
To: Wisniewski, Wendy (GOV) <wisniewskiw@michigan.gov>
Subject: FW: Hurley Hospital's bulletin regarding Flint water

FYI..... so ????

From: Lasher, Geralyn (DCH)
Sent: Thursday, September 24, 2015 12:27 PM
To: Lyon, Nick (DCH); Grijalva, Nancy (DCH); Becker, Timothy (DCH); Minicuci, Angela (DCH); Eisner, Jennifer (DCH); Hertel, Elizabeth (DCH); Robinson, Mikelle (DCH); Moran, Susan (DCH)
Subject: FW: Hurley Hospital's bulletin regarding Flint water

Mikelle has been told the Genesee Health Department will also be at the press conference today in Flint with the below groups. They have put together a fact sheet on lead and water that they will be sending us this afternoon.

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Subject: Hurley Hospital's bulletin regarding Flint water

Team,

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Dave

HURLEY MEDICAL CENTER

Contact: Rebecca Jensen
[redacted]
September 24, 2015

Media Alert

FOR IMMEDIATE RELEASE

WHO: **Genesee County Medical Community**, including Hurley Medical Center, Greater Flint Health Coalition, Mott Children's Health Center, Hamilton Community Health Network & Genesee County Medical Society

WHAT: Press conference to address medical community's concerns regarding lead levels in the city of Flint's water supply and appropriate precautionary measures.

WHEN: **3pm, Today, September 24th, 2015**

WHERE: Hurley Medical Center, Charles White Conference Center

Media Note: Please enter on the Sixth Avenue entrance and check in with front desk upon arrival to be escorted to the Charles White Conference Center.

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

HURLEY
MEDICAL CENTER

HURLEY
MEDICAL CENTER

From: Lasher, Geralyn (DCH)
Sent: Thursday, September 24, 2015 4:15 PM
To: Muchmore, Dennis (GOV); Baird, Richard (GOV); Wurfel, Sara (GOV); Murray, David (GOV); Agen, Jarrod (GOV); Lyon, Nick (DCH); Clement, Elizabeth (GOV); Mcbride, Bill (GOV); Walsh, John (GOV); Hollins, Harvey (GOV); Wurfel, Brad (DEQ); Wyant, Dan (DEQ)
Cc: Lyon, Nick (DCH); Hertel, Elizabeth (DCH); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH); Eisner, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Updated MDHHS talking points, data
Attachments: FINAL Flint Lead TP 092415.docx; BLLs in Flint v2.pptx; Flint Testing and EBLLs_updated 092315_with notes.pdf

Attached you will find a copy of our talking points as well as tables that outline our data on blood lead testing in children in Flint before and after the change in Flint's water.

While the chart is a bit cluttered with the different colored lines representing different years, in the bullet point narrative, you can see that our experts state that if the elevated blood lead levels were being driven by the change in water, we would expect the dark blue line to stay high rather than follow the seasonal pattern.

Thank you,
Geralyn

Blood Lead Levels in Flint Talking Points
September 24, 2015

- Promoting the health of our residents is a statewide priority – a priority that includes ensuring clean, safe drinking water for all residents and especially children.
- The results of the Hurley Children's Hospital are under review by the Michigan Department of Health and Human Services.
- The analysis that Hurley conducted is different from the way MDHHS has analyzed data regarding blood lead levels in Flint.
- MDHHS is looking to see if we can replicate the results of the Hurley study to see how they achieved their results.

MDHHS Blood Lead Testing Results in Flint

- MDDHS data shows a comprehensive look at the data since 2010, years before the change in Flint's water source occurred in April 2014.
- Each year shows a seasonal increase in childhood lead poisoning in the summer months, the highest seasonal increase of which occurred in 2010.
- If elevated blood lead levels were being driven by the change in water, we would expect to see the elevated levels remain high after the change in water source, rather than follow the seasonal pattern as they did by decreasing in the fall months.
- All data included in the MDHHS analysis were reported by laboratories directly to MDHHS, in accordance with State Law.

Differences in Analysis

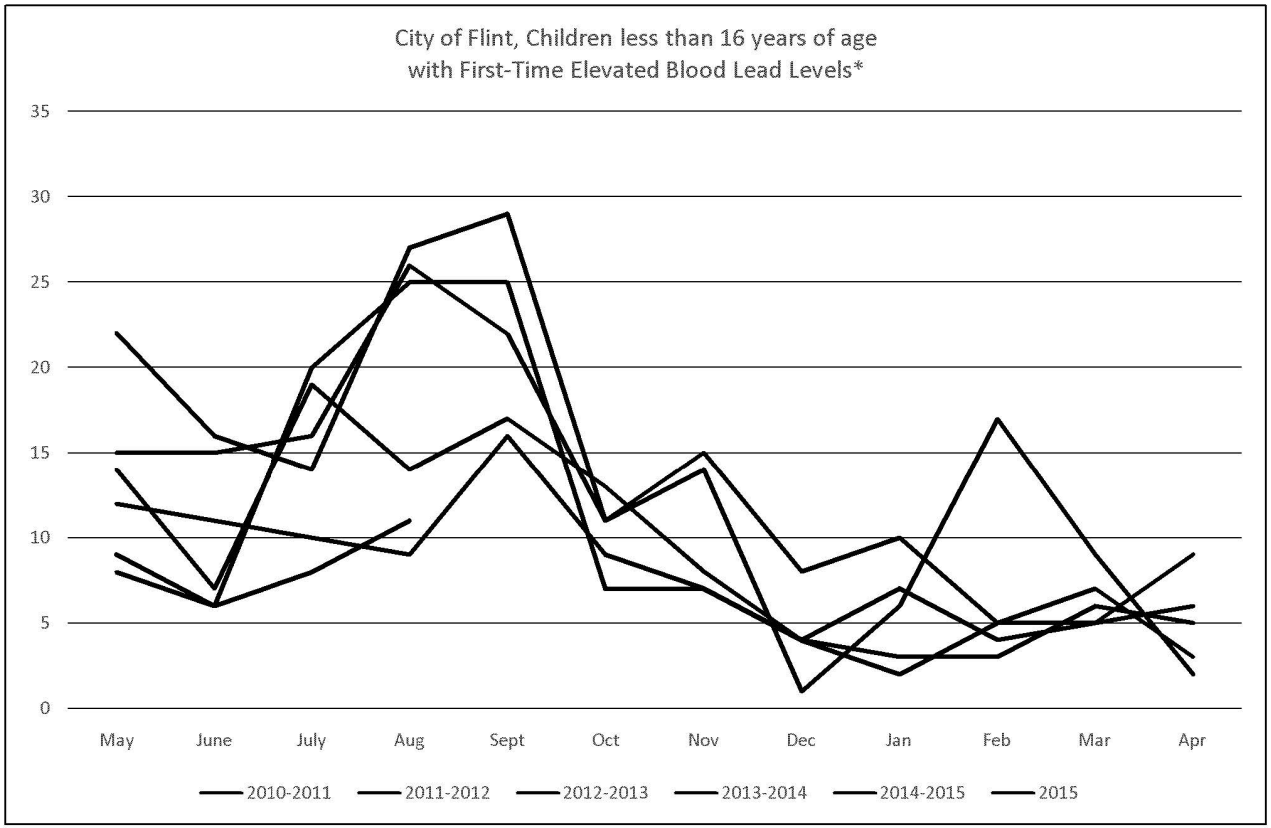
- MDHHS data provides a much more robust picture of the entire blood lead levels for the Flint area, and specifically, accounts for data over the full course of the past five years.
- Looking at the past five years as a whole provides a much more accurate look at the seasonal trends of lead in the area.
- Seasonal exposure is higher in the summer for a variety of reasons including children playing outside in the soil, and when windows are open and lead paint is more likely to be in the air. This seasonal increase would be unrelated to the water system.
- Our data includes children from the entire city, including all medical facilities, rather than just Hurley, has a larger age group of children, and includes a much larger sample size.
- The MDHHS analysis looks specifically at the first elevated blood lead level for each child, which provides an accurate picture of when first exposure occurred.
- The Hurley data includes a smaller sample size, much more limited time period (January-September of 2013 and 2015 only), and a smaller age group of children.

WIC Children

- In homes with infants on WIC, if the household has documentation from an official source of unsanitary water supply issues, that family may be eligible to receive ready-to-feed formula. Families should contact WIC to see if they are eligible.
- Each household would have to be looked at on an individual basis.
- WIC cannot cover bottled water.

Blood Lead Testing of Children in Flint, Before and After the Change in Flint's Water

- The change in Flint's water source occurred in April 2014. MDHHS looked at children's blood lead levels (BLL) before and after this event.
- The dark blue line (May 2014 – April 2015) and the green line (May-August 2015) reflect children's blood lead tests after the change. All other lines reflect tests before the change.
- An increase in childhood lead poisoning in summer (July, August, September) is typical throughout Michigan every year.
- While there is a dramatic difference between the numbers of elevated BLL in the summer before and after the event, a wider look that includes data back to 2010 shows that the year BEFORE the event (the yellow line) was more of an anomaly than the year after (the dark blue line).
- If elevated BLL were being driven by the change in water, we would expect the dark blue line to stay high rather than follow the seasonal pattern.
- All data included in this analysis were reported by laboratories directly to MDHHS, in accordance with State law.



*This graph includes:

Children whose address is listed as "Flint"--may not conform exactly to Flint city limits

Children less than 16 years of age at time of test

Only first-time blood lead levels >= 5 ug/dL

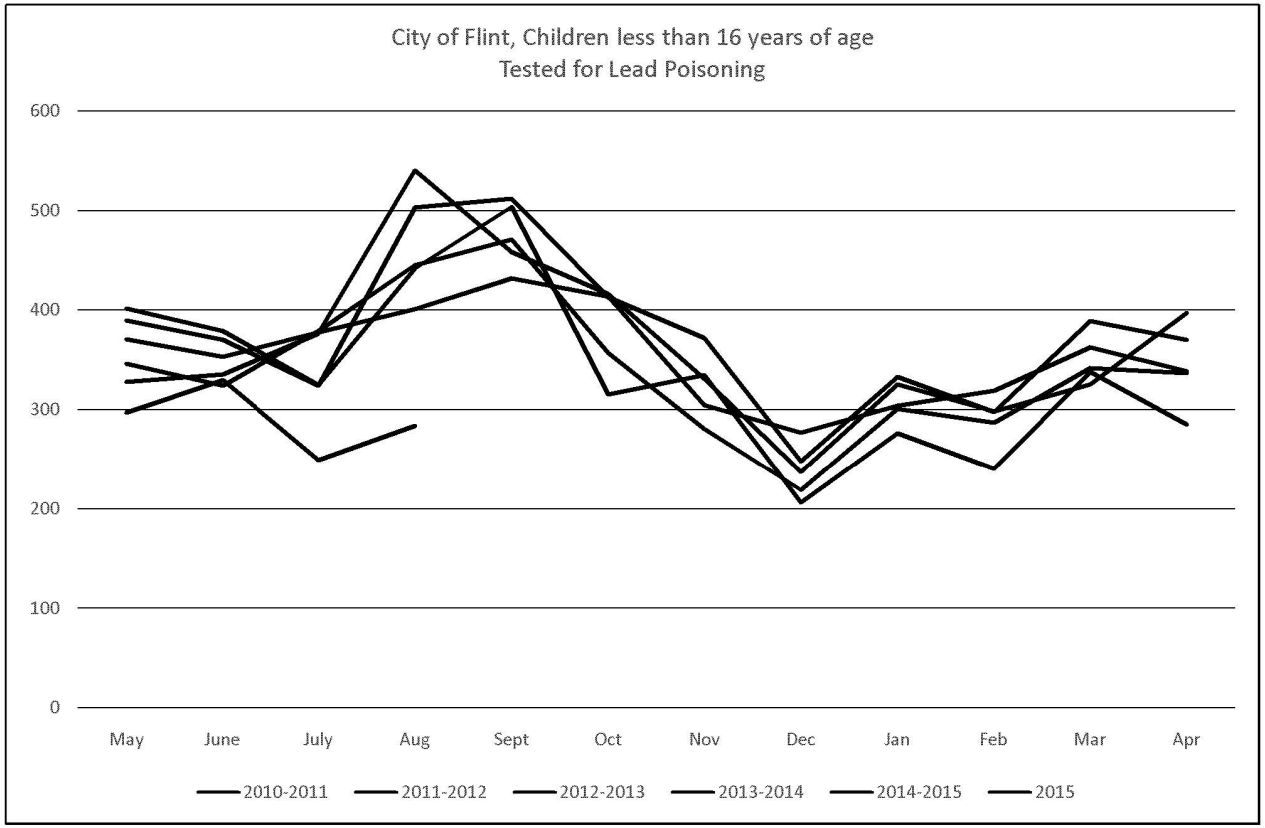
All first-time elevated levels, regardless of sample type (venous, capillary or unknown)

September 24, 2015

Source: MDHHS Data Warehouse, Lead Specimen table

Blood Lead Testing of Children in Flint, Before and After the Change in Flint's Water

- Blood lead testing (regardless of elevated levels) also tends to rise during late summer (August, September, October).
- This graph shows that testing in Flint has remained fairly steady over the last five years, except for a recent decline(May – August 2015).



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September 24, 2015

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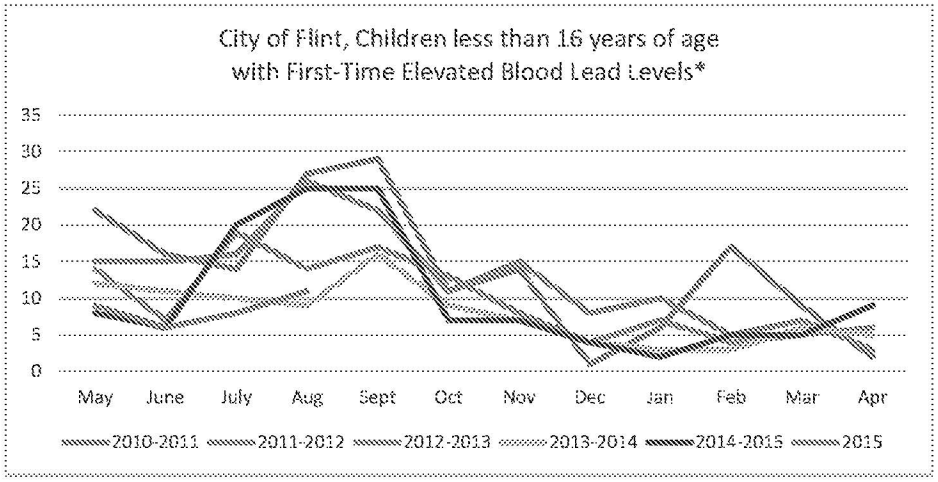

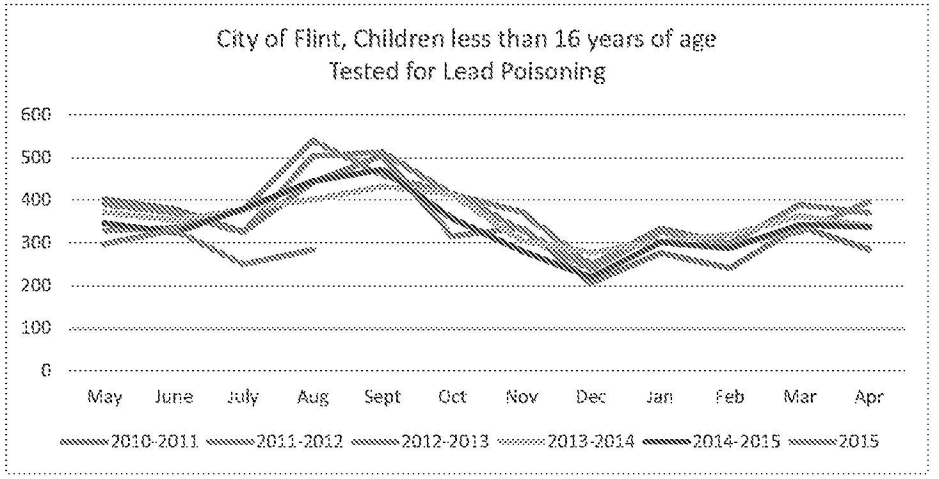

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2010-2011	22	16	14	27	29	11	14	1	6	17	9	2
2011-2012	15	15	16	26	22	11	15	8	10	5	7	3
2012-2013	14	7	19	14	17	13	8	4	7	4	5	6
2013-2014	12	11	10	9	16	9	7	4	3	3	6	5
2014-2015	8	6	20	25	25	7	7	4	2	5	5	9
2015	9	6	8	11								

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2010-2011	402	379	325	442	504	315	335	206	276	240	338	285
2011-2012	390	370	324	503	512	413	372	248	333	298	389	370
2012-2013	328	335	376	540	458	416	331	237	325	298	325	397
2013-2014	371	353	378	401	432	414	305	277	304	319	363	339
2014-2015	346	324	379	445	471	357	281	219	301	287	342	337
2015	297	330	249	284								

*Children whose address is listed as "Flint"--may not conform exactly to Flint city limits
Less than 16 years of age at time of test
Includes only first-time blood lead levels >= 5 ug/dL
Includes sample type of venous, capillary or unknown

September 23, 2015
Source: MDHHS Data Warehouse, Lead Specimen table

From: Lasher, Geralyn (DCH)
Sent: Friday, September 25, 2015 4:47 PM
To: Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Lyon, Nick (DCH); Wyant, Dan (DEQ)
Cc: Wurfel, Brad (DEQ); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH); Hertel, Elizabeth (DCH)
Subject: Update
Attachments: Lead Advisory Release.pdf; BLLs in Flint v2.pptx; FINAL Flint Lead TP 092415.docx

Quick recap on the interactions this week from the MDHHS side on the Flint water issue.

Today the City of Flint issued the attached "Lead Advisory" for residents to be aware of lead levels in drinking water and issued suggestions from the Genesee County Health Department as to what residents could do to reduce risk. These include:
-- flushing cold-water pipes by running water for approximately 5 minutes,
--using only water from the cold-water tap for drinking, cooking and making baby formula
--installing a water filter that is NSF-certified for lead removal.

We worked with the Genesee County Health Department throughout the week to get them in a more pro-active mode to provide this guidance publicly and to encourage citizens to have the City test their water if they were concerned about the quality of water at their home. The health department also issued this fact sheet http://www.gchd.us/docs/Popular_Pages/GCHD_Lead_in_Water_Fact_Sheet_2_.pdf on Thursday providing additional information on the issue.

MDHHS epidemiologists continue to review the "data" provided by a Hurley hospital physician that showed an increase in lead activity following the change in water supply. While we continue to review this data, we have stated publicly that Hurley conducted their analysis in a much different way than we do at the department. Hurley used two partial years of data, MDHHS looked at five comprehensive years and saw no increase outside the normal seasonal increases. The Hurley review was also a much smaller sample than MDHHS data as ours includes all hospital systems in Flint as well as outside laboratories.

We have also provide the attached data chart that outlines if the elevated blood lead levels were being driven by a change in water, we would have seen the elevated levels remain high after the change in water source.

We have also communicated that for WIC beneficiaries in Flint with documentation of unsanitary water, they may be able to receive ready to feed formula and have encouraged families to contact WIC to see if they are eligible for this formula. SNAP beneficiaries are able to purchase bottled water with their SNAP funds.

Talking points from MDHHS are attached as well.

Thank you,
G

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
[redacted]
jlorenz@cityofflint.com

For Immediate Release

City of Flint Issues Lead Advisory

Flint, Michigan – September 25, 2015 – The City of Flint is issuing a Lead Advisory for residents to be aware of lead levels in drinking water after hearing concerns from the medical community. While the City is in full compliance with the Federal Safe Drinking Water Act, this information is being shared as part of a public awareness campaign to ensure that everyone takes note that no level of lead is considered safe.

The Genesee County Health Department has issued a fact sheet regarding lead precautions for residents. The fact sheet can be found on their website at www.gchd.us. Here are a few of the suggestions the Health Department recommends:

- Flush your cold-water pipes by running the water for approximately 5 minutes
- Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula.
- Install a water filter that is NSF-certified for lead removal.

Lead contamination can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes.

This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue. Residents with concerns about lead service lines

and lead in home plumbing fixtures are encouraged to contact the City's Utilities Division to schedule a free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. An accelerated plan to add a corrosion control agent to our water within 30 to 60 days with expedited approval from the Michigan Department of Environmental Quality is already underway. This will reduce corrosion which can cause lead in old pipes to leach into the water.

This plan is in addition to Mayor Walling's letter requesting $30 Million in water infrastructure assistance funding from the State of Michigan. $10 Million of that request would be for the replacement of lead service lines in households to ensure that lead no longer presents a danger to the drinking water of our residents. As the letter states, "It is the City's position that the abatement of lead through the removal of lead containing pipes and fixtures in homes is the best long term solution to keeping our residents' water safe."

Mayor Walling further stated: "I am extremely concerned about the risks around lead with Flint's children and I will be working tirelessly to ensure the water is safe and all of our families have the information they need. I also will continue to pursue funding for infrastructure improvements and a comprehensive healthy homes initiative that addresses lead in paint and pipes. We have to get the lead out of our community to eliminate the threat of childhood lead poisoning."

The City of Flint continues working proactively with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. The City remains committed to working with all of our partners in the Water Technical Advisory Committee to address all

issues of public health and quality concerns that face the community. Updates on progress made in addressing this issue will be made during regular public meetings including City Council and other scheduled meetings. Information on this and all related matters will continue to be posted on the City of Flint's website, cityofflint.com.

–END–

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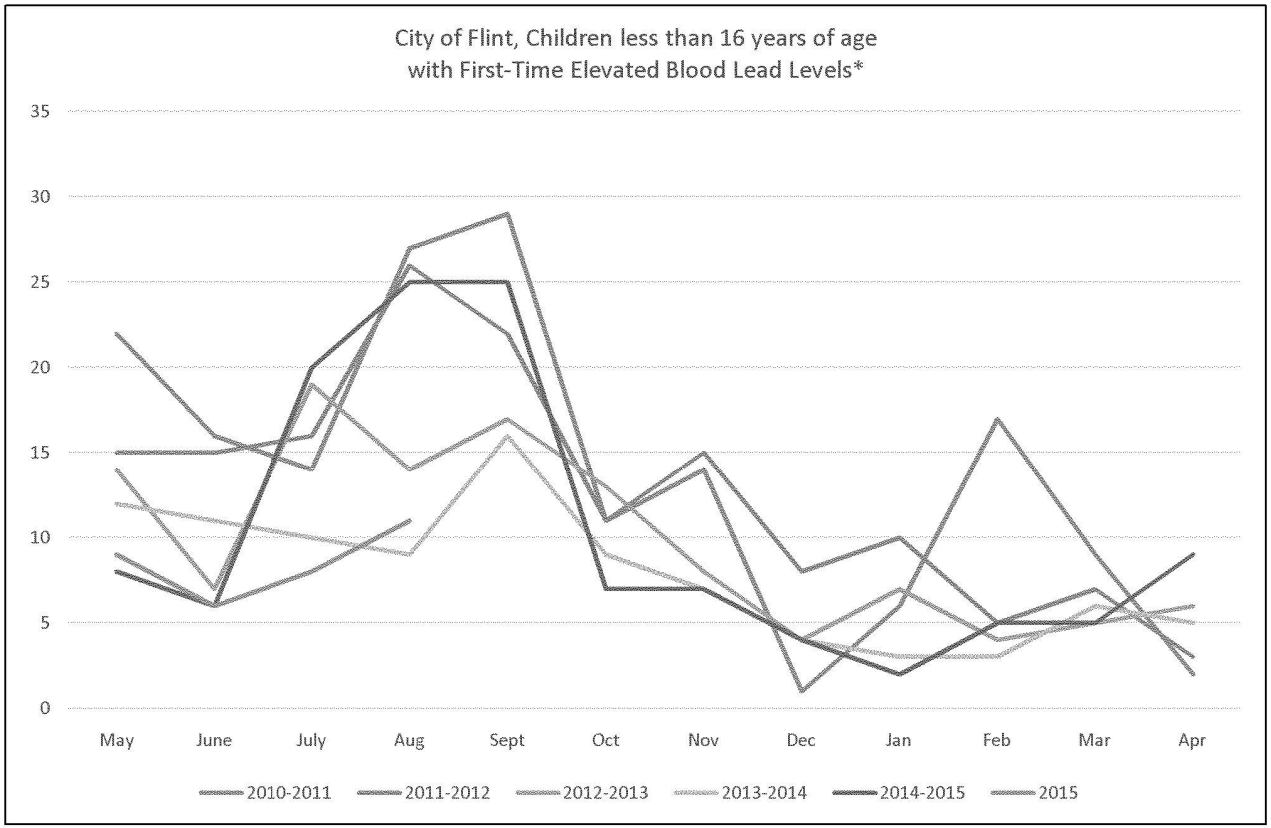

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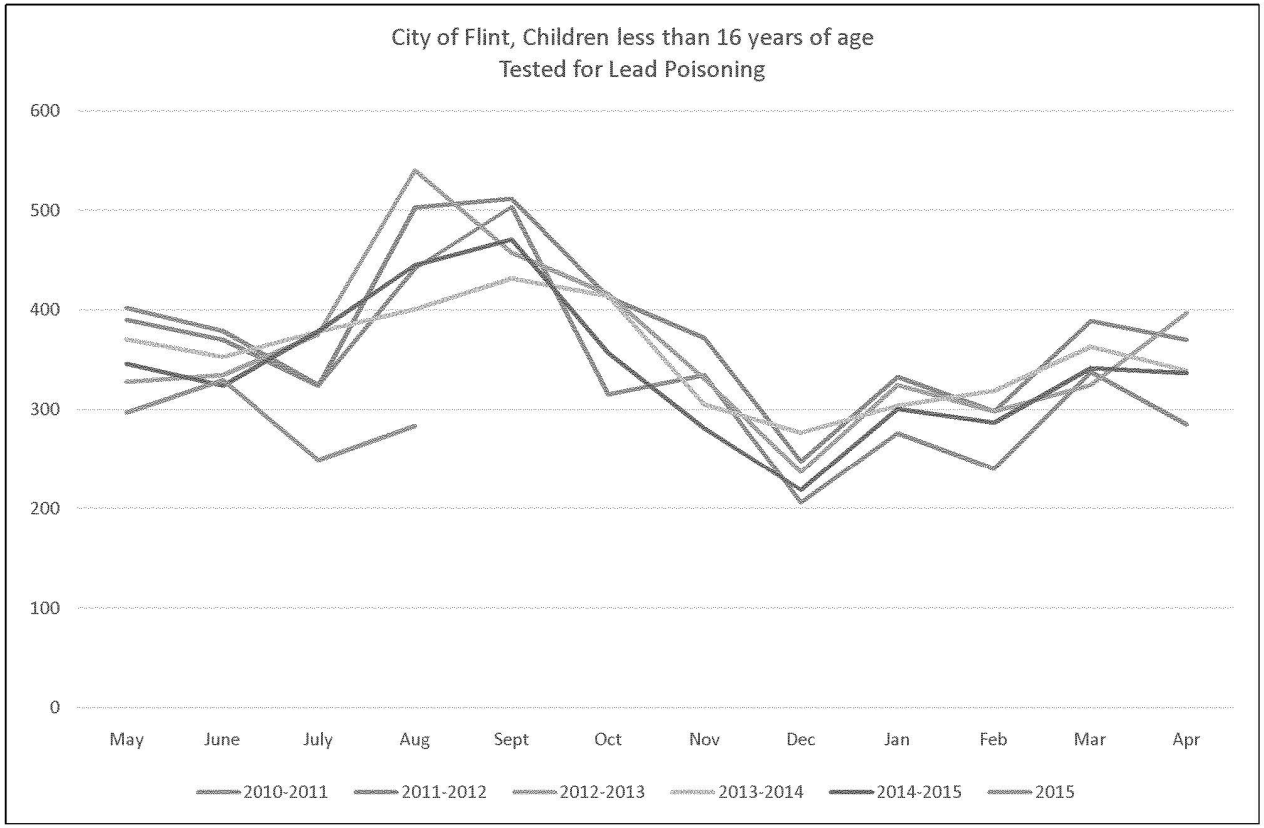

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Source: MDHHS Data Warehouse, Lead Specimen table

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September 24, 2015

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- Each year shows a seasonal increase in childhood lead poisoning in the summer months, the highest seasonal increase of which occurred in 2010.
- If elevated blood lead levels were being driven by the change in water, we would expect to see the elevated levels remain high after the change in water source, rather than follow the seasonal pattern as they did by decreasing in the fall months.
- All data included in the MDHHS analysis were reported by laboratories directly to MDHHS, in accordance with State Law.

Differences in Analysis

- MDHHS data provides a much more robust picture of the entire blood lead levels for the Flint area, and specifically, accounts for data over the full course of the past five years.
- Looking at the past five years as a whole provides a much more accurate look at the seasonal trends of lead in the area.
- Seasonal exposure is higher in the summer for a variety of reasons including children playing outside in the soil, and when windows are open and lead paint is more likely to be in the air. This seasonal increase would be unrelated to the water system.
- Our data includes children from the entire city, including all medical facilities, rather than just Hurley, has a larger age group of children, and includes a much larger sample size.
- The MDHHS analysis looks specifically at the first elevated blood lead level for each child, which provides an accurate picture of when first exposure occurred.
- The Hurley data includes a smaller sample size, much more limited time period (January-September of 2013 and 2015 only), and a smaller age group of children.

WIC Children

- In homes with infants on WIC, if the household has documentation from an official source of unsanitary water supply issues, that family may be eligible to receive ready-to-feed formula. Families should contact WIC to see if they are eligible.
- Each household would have to be looked at on an individual basis.
- WIC cannot cover bottled water.

From:	Lyon, Nick (DCH)
Sent:	Friday, July 31, 2015 10:57 AM
To:	Muchmore, Dennis (GOV); Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc:	Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH)
Subject:	Re: Updated Memo on Water Coalition Questions - July 29
Attachments:	Flint Testing and EBLLs_2.xlsx

Our Public Health staff followed up a bit more on the lead question. Below is their email update to me.

From: Grijalva, Nancy (DCH)
Sent: Wednesday, July 29, 2015 11:23 AM
To: Lyon, Nick (DCH)
Subject: FW: Director's Office Assignment -- Flint - need update asap
FYI.....
-----Original Message-----
From: Peeler, Nancy (DCH)
Sent: Tuesday, July 28, 2015 2:57 PM
To: Anderson, Paula (DCH); Miller, Corinne (DCH); Travis, Rashmi (DCH); Moran, Susan (DCH); Grijalva, Nancy (DCH); Fink, Brenda (DCH)
Cc: Priem, Wesley F. (DCH); Dykema, Linda D. (DCH); Bouters, Janese (DCH); Barr, Jacqui (DCH)

Subject: RE: Director's Office Assignment -- Flint - need update asap

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We looked at lead testing results for May 2014-April 2015, which is the 12 month time frame just after Flint started drawing their water from the river (water source changed in April 2014).

We compared lead testing rates and lead testing results to the same time frame for the previous 3 years, to see if there were any patterns that suggested that there were increased rates of lead poisoning after the water supply was switched. Per the attached charts –

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- However that pattern was not terribly different from what we saw in the previous three years, especially in 2011-2012 (we are working with our Epidemiologist to statistically verify any significant differences).
- We commonly see a 'seasonal effect' with lead, related to people opening and closing windows more often in the summer, which disturbs old deteriorating paint on the windows, sills and sashes. Window fans frequently blow and spread the lead dust from the deteriorating paint to other parts of the room/house. We suspect that the summer data spike may be related to this effect.
- If the home water supply lines and/or river water were contributing to elevated blood lead tests, we

expected that the increased rates would extend beyond the summer, but they drop quite a bit from September to October, stayed low over the winter, and are just starting to tail up again in the spring of 2015.

So upon review, we don't believe our data demonstrates an increase in lead poisoning rates that might be attributable to the change in water source for Flint. We recognize that lead exposure via the water is only a small piece of what may be happening for families in Flint, however, we hope the information is helpful.

Nancy Peeler

From: Muchmore, Dennis (GOV)
Sent: Wednesday, July 29, 2015 9:02 AM
To: Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: RE: Updated Memo on Water Coalition Questions - July 29

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Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: FW: Updated Memo on Water Coalition Questions - July 29
Importance: High

All, Attached is a memo and water rate summary answering several of the questions raised by the Flint pastors. Please let me know if you have any questions. Wayne

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Deputy State Treasurer
Michigan Department of Treasury

From: Cline, Richard (Treasury)
Sent: Wednesday, July 29, 2015 8:21 AM
To: Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury); Byrne, Randall (Treasury)
Subject: Updated Memo on Water Coalition Questions - July 29
Importance: High

Wayne,

Attached is the water rate table you asked for and I have updated the memo to reference this as an attachment.

If you need anything else, please let me know.

Note that Rob, Randy and I will be in Benton Harbor for a portion of today conducting their annual RTAB evaluation.

Eric Cline | Department Manager
State of Michigan | Michigan Department of Treasury | Office of Fiscal Responsibility
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228
E-mail clinerl@michigan.gov

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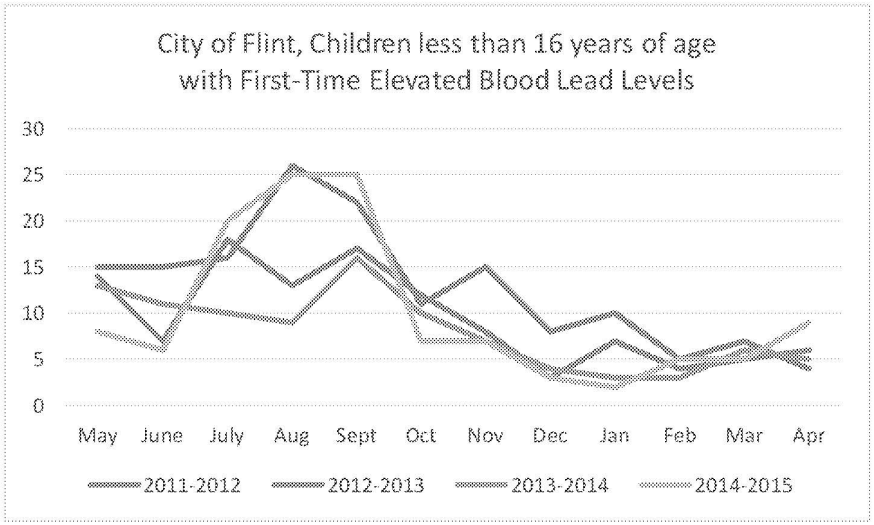
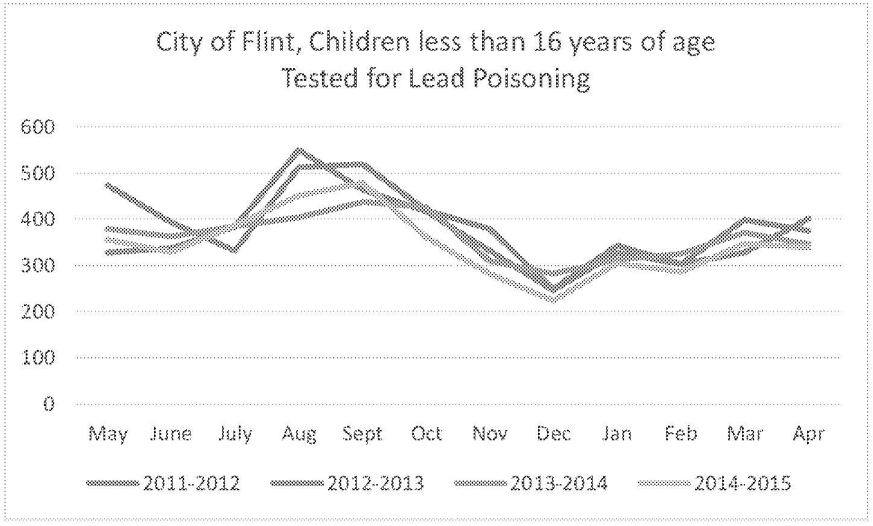


	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011-2012	15	15	16	26	22	11	15	8	10	5	7	4
2012-2013	14	7	18	13	17	12	8	3	7	4	5	6
2013-2014	13	11	10	9	16	10	7	4	3	3	6	5
2014-2015	8	6	20	25	25	7	7	3	2	5	5	9



	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011-2012	474	393	332	513	520	420	379	249	343	303	399	375
2012-2013	328	338	383	550	464	417	332	246	328	303	328	402
2013-2014	380	363	385	404	438	427	310	283	313	325	371	346
2014-2015	356	329	386	452	480	361	283	224	305	287	348	339

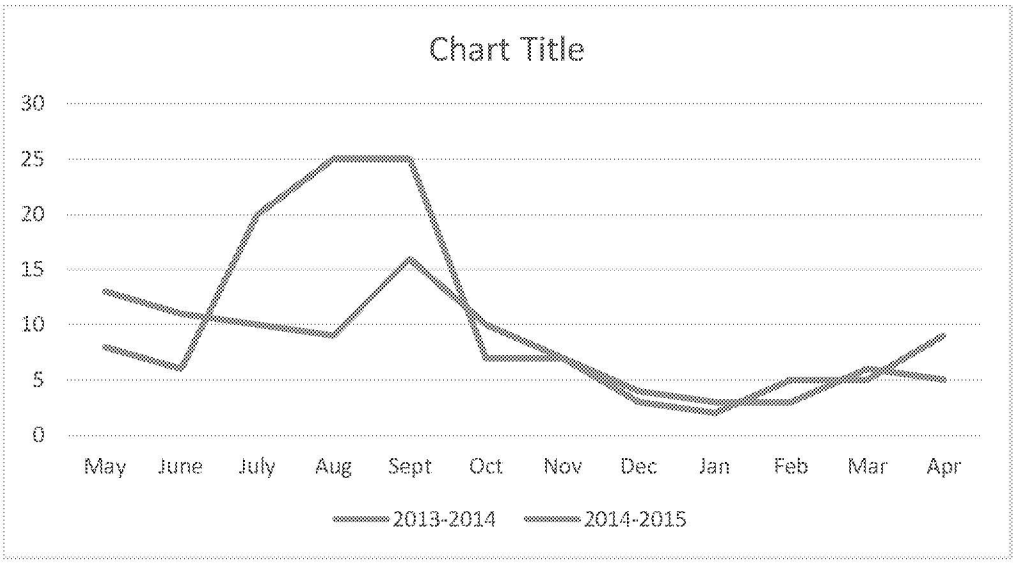


Chart Title
30
25
20
15
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0
May
June
July
Aug
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Oct
Nov
Dec
Jan
Feb
Mar
Apr
2013-2014
2014-2015

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Subject: RE: Updated Memo on Water Coalition Questions - July 29

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Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
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From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 11:52 AM
To: Lyon, Nick (DCH); Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH)
Subject: RE: Updated Memo on Water Coalition Questions - July 29

Can I reprint Nancy's email?

From: Lyon, Nick (DCH)
Sent: Friday, July 31, 2015 10:57 AM
To: Muchmore, Dennis (GOV); Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
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Our Public Health staff followed up a bit more on the lead question. Below is their email update to me.

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Wayne,

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From: Wisniewski, Wendy (GOV)
Sent: Tuesday, January 20, 2015 10:55 AM
To: Hall, Jean (GOV)
Subject: RE: Flint Water

I don't think this is my meeting. It says in the email that Dick has a meeting scheduled on the 28th.

From: Hall, Jean (GOV)
Sent: Monday, January 19, 2015 10:56 AM
To: Wisniewski, Wendy (GOV)
Subject: FW: Flint Water

Can you make sure that John is in the internal meeting once it is scheduled?

Jean Hall
Executive Assistant
Office of Strategic Policy
Executive Office of Governor Rick Snyder
Hallj16@michigan.gov
517-241-5493

From: Walsh, John (GOV)
Sent: Monday, January 19, 2015 10:52 AM
To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury)
Cc: Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Clement, Elizabeth (GOV)
Subject: RE: Flint Water

While I am sure there is much history of which I am not aware, my relatively uninformed response is to question why the State has to intervene in their negotiations with DWSD. I certainly understand our responsibilities arising from the appointment of an EM and allowing them to "chase their tail", but when do they own the consequences of their decisions?

I would like to participate in the internal meeting prior the meeting on the 28th.

Thanks.

From: Muchmore, Dennis (GOV)
Sent: Monday, January 19, 2015 10:45 AM
To: Saxton, Thomas (Treasury)
Cc: Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Walsh, John (GOV); Clement, Elizabeth (GOV)
Subject: RE: Flint Water

Yes, this would be pretty complicated to do now after we agreed to allow them to chase their tail on the Karegondi system. A lot of money has been invested to this point.

From: Saxton, Thomas (Treasury)
Sent: Monday, January 19, 2015 10:30 AM
To: Muchmore, Dennis (GOV)

Cc: Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Walsh, John (GOV); Clement, Elizabeth (GOV)
Subject: RE: Flint Water

I assume you saw the attached. At this point we are trying to determine whether this (DWSD offer) makes economic sense. As you know the past discussions between the City & DWSD haven't been that productive.
Dick P. has also scheduled a mtg on the 28th with the Mayor, Jerry et al. I think you are scheduled to be in that. We should probably have an internal meeting just prior to that meeting.
Also, I haven't talked to DEQ/Dan W. since probably Nov. I will try to do that this week to get their perspective, etc.

From: Muchmore, Dennis (GOV)
Sent: Monday, January 19, 2015 10:13 AM
To: Saxton, Thomas (Treasury); Walsh, John (GOV); Hollins, Harvey (GOV)
Subject: FW: Flint Water

Now what?

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Sunday, January 18, 2015 4:16 PM
To: GovernorsOffice; Snyder, Rick (GOV)
Cc: Joshua Freeman; senjananich@senate.mi.gov; Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Gerald Ambrose
Subject: Flint Water

Dear Governor,

There is nothing more important in Flint right now than fixing the water problems. Attached is a letter outlining a plan with my request for your support. I urge you to work with all of us in the Flint community to implement solutions.

Sincerely,

Mayor Walling

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

Subject: Conf Call re Flint Water
Location: 888.[redacted]

Start: Thu 9/24/2015 2:30 PM
End: Thu 9/24/2015 3:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Muchmore, Dennis (GOV)
Required Attendees: Harvey Hollins (hollinsh@michigan.gov); Clement, Elizabeth (GOV) (clemente@michigan.gov); Clayton, Stacie (GOV); Baird, Richard (GOV); VanSickle, Michele (GOV) (vansicklem2@michigan.gov); Murray, David (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Lasher, Geralyn (DCH); Grijalva, Nancy (DCH); Saxton, Thomas (Treasury) (SaxtonT@michigan.gov); Pleyte, Beth (Treasury); Walsh, John (GOV) (WalshJ@michigan.gov); Hall, Jean (GOV); Mcbride, Bill (GOV)

888.[redacted]
[redacted]
[redacted]– Harvey to host

From: Muchmore, Dennis (GOV)
Sent: Monday, January 19, 2015 10:13 AM
To: Saxton, Thomas (Treasury); Walsh, John (GOV); Hollins, Harvey (GOV)
Subject: FW: Flint Water
Attachments: Mayor Governor Letter Flint Water Jan 18 2015.PDF

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mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

CITY OF FLINT

Dayne Walling
Mayor

January 18, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing to convey serious concerns about water quality and to request your support for my proposed Flint Water Improvement Plan. Access to safe and clean water is a basic human right, and, therefore, policy and budget decisions need to ensure that water is affordable and secure for everyone in Flint and all across Michigan It is essential there is City, State and Federal cooperation to address the challenges here and to meet the needs of vulnerable populations.

The Flint Water Improvement Plan is focused in five areas: safety, quality, access, investment and education. The plan puts safety and quality first because this is fundamental. It is designed to be a sustainable solution for the City of Flint and the community as we move towards a new permanent water supply from Lake Huron through the Karegnondi Water Authority. My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the State and Federal levels.

Safety & Quality

- 100% Safety is the standard
- City of Flint reports testing data to the public to assure safety and expands testing sites and frequency
- Bring on experienced river water treatment operational management in the City of Flint

Access

- Announce an amnesty program for Flint water service turn-ons and reduce the turn-on fee
- Develop a revised affordable payment plan policy to encourage customers to return
- Design Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for the elderly and vulnerable families

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State investments
    - State approves City of Flint's Distressed Cities Fund applications

- Federal and State support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community
- Federal and State grants for infrastructure improvements in alignment with the Flint Master Plan

* City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

* Develop a community partnership with universities to provide household and business customers with information on testing and conservation
* Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information and water assistance with the Keep the Water Flowing Fund and support services
* Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

It is also critical to restore the public confidence in Flint Water. The implementation of this plan must be accompanied by extensive community engagement including local elected officials. My objective is to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and government personnel.

It is imperative that we communicate better and provide residents more information. I understand representatives from the Michigan Department of Environmental Quality will be joining a public forum this week at City Hall. This engagement going forward is vital so thank you for supporting their efforts. I think this issue of transparency is important for communities all across the State. I recommend a review of the applicable laws and policies and, at a minimum, a new requirement that water testing data be reported publicly no less than quarterly by law in all Michigan communities in Flint's population category.

Thank you for the consideration Governor. There is nothing more important in Flint right now than fixing the water problems. We must work together to identify funds to repair and update the water treatment facilities and city-wide infrastructure and to help those persons without access to clean water so that the entire Flint community has sustainable, safe, secure and affordable water now and into the future. This is an important issue for the state of our State of Michigan and I urge you to work with us to implement solutions.

Sincerely,

Dayne Walling, Mayor
City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; Flint Emergency Manager Jerry Ambrose

From: Muchmore, Dennis (GOV)
Sent: Monday, January 19, 2015 10:45 AM
To: Saxton, Thomas (Treasury)
Cc: Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Walsh, John (GOV); Clement, Elizabeth (GOV)
Subject: RE: Flint Water

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From: Saxton, Thomas (Treasury)
Sent: Monday, January 19, 2015 10:30 AM
To: Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Walsh, John (GOV); Clement, Elizabeth (GOV)
Subject: RE: Flint Water

I assume you saw the attached. At this point we are trying to determine whether this (DWSD offer) makes economic sense. As you know the past discussions between the City & DWSD haven't been that productive.
Dick P. has also scheduled a mtg on the 28th with the Mayor, Jerry et al. I think you are scheduled to be in that. We should probably have an internal meeting just prior to that meeting.
Also, I haven't talked to DEQ/Dan W. since probably Nov. I will try to do that this week to get their perspective, etc.

From: Muchmore, Dennis (GOV)
Sent: Monday, January 19, 2015 10:13 AM
To: Saxton, Thomas (Treasury); Walsh, John (GOV); Hollins, Harvey (GOV)
Subject: FW: Flint Water

Now what?

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Sunday, January 18, 2015 4:16 PM
To: GovernorsOffice; Snyder, Rick (GOV)
Cc: Joshua Freeman; senjananich@senate.mi.gov; Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Gerald Ambrose
Subject: Flint Water

Dear Governor,

There is nothing more important in Flint right now than fixing the water problems. Attached is a letter outlining a plan with my request for your support. I urge you to work with all of us in the Flint community to implement solutions.

Sincerely,

Mayor Walling

--
Dayne Walling
Mayor, City of Flint

City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Adler, Ari (GOV)
Sent: Friday, October 16, 2015 8:52 AM
To: Murray, David (GOV); Wurfel, Sara (GOV); Stoken, Laura (GOV)
Cc: Brownfield, Michael (GOV)
Subject: RE: Lead Poisoning Proc

NO

--
Ari B. Adler
Special Projects Manager
Executive Office of Gov. Rick Snyder
adlera@michigan.gov
517-599-5445

On Fri, Oct 16, 2015 at 5:34 AM -0700, "Stoken, Laura (GOV)" <Stokenl@michigan.gov> wrote:

Hey There,

MDHHS requested on September 18th the Governor to issue a proclamation for Lead Poisoning Awareness Prevention and Prevention Week (October 25 – October 31). Given recent events I am not sure this is something we want to be issuing.

We did issue this proclamation in 2012 and 2014.

I am going to decline the proclamation unless you think this is something we should be doing.

Thanks,

Laura

From: Kica, Beata (GOV)
Sent: Friday, October 16, 2015 8:20 AM
To: Stoken, Laura (GOV) <Stokenl@michigan.gov>
Subject: Lead Poisoning Proc

Hi Laura,

Received an email this morning from Janice Berry at MDHHS checking in on a proclamation they requested on Sept. 18th for Lead Poisoning Awareness and Prevention month. It was sent to the tributes email but it doesn't look like any follow up happened with it. We do have a copy of a proc we did for this last year. I could put it together quickly, but am not sure with recent events what your take on this is.

Thanks!
Beata

From: Hall, Jean (GOV)
Sent: Tuesday, November 03, 2015 4:44 PM
To: Muchmore, Dennis (GOV); Mcbride, Bill (GOV); Agen, Jarrod (GOV); Walsh, John (GOV)
Cc: Scott, Allison (GOV); Clement, Elizabeth (GOV); Khouri, Claire (GOV); Wurfel, Sara (GOV); Brown, Eric (GOV); Blackwell, Rob (GOV); Arwood, Cheri (GOV); Hansen, Rachel (GOV); Taylor, Nicole (GOV); Brownfield, Michael (GOV); Redford, James (GOV); Wisniewski, Wendy (GOV); Thomet, Ruth (GOV); Stoken, Laura (GOV); Kennedy, Jordan (GOV); Lukasik, Liz (GOV); Weber, Travis (GOV); Ayers, Angela (GOV)
Subject: DEQ Seeks Gov. Signature- Letter to EPA - Flint Safe Drinking Water POC - NEEDED BY Tues. 11.10.15
Attachments: 11.2.15 DEQ USEPA Flint Water Task Force.doc; Information Transmittal USEPA Task Force 11-3-15.pdf

Importance: High

Hello All,

DEQ is seeking the Governor's signature on the attached letter to Dr. Susan Hedman, Regional Administrator, USEPA, Region 5. The letter designates Jim Sygo, Chief Deputy Director, MDEQ as the DEQ point person for the USEPA – Region 5 Flint Safe Drinking Water Task Force.

For your reference, DEQ provided the attached Transmittal Form , along with a copy of the October 21 Flint Drinking Water Action Plan Update which includes a summary about the conference call with USEPA and MDEQ where the USEPA requested this letter. The attachment also includes the USEPA's October 16 press release about the establishment of the Task Force (see yellow highlighted text in both attachments)

Your approval, input, and/or changes are needed by EOB by **Tues. 11.10.15.**

If you have any questions or need additional background information, please let me know.

Thank you.

Jean Hall
Executive Assistant
Office of Strategic Policy
Executive Office of Governor Rick Snyder
Hallj15@michigan.gov
517-241-5493

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

November 2, 2015

Dr. Susan Hedman, Regional Administrator
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (R-19J)
Chicago, Illinois 60604-3507

Dear Dr. Hedman:

This letter is in follow up to a conference call on October 20, 2015 between the United States Environmental Protection Agency (USEPA), Region 5, and the Michigan Department of Environmental Quality (MDEQ). The purpose of that call was to discuss Region 5's Flint Safe Drinking Water Task Force (Task Force) that was established to provide the USEPA's technical expertise to the MDEQ and the city of Flint, Michigan.

During that call, it was requested that the State of Michigan provide the USEPA with an MDEQ point of contact for the Task Force. This letter is to inform you of the designation of Mr. Jim Sygo, Chief Deputy Director, MDEQ, as that point of contact. Mr. Sygo's contact information is below:

Michigan Department of Environmental Quality
P.O. Box 30473
Lansing, MI 48909-7973
sygoj@michigan.gov
517-284-6709

Thank you for your assistance in this matter as we work together to ensure a safe and reliable drinking water supply for the city of Flint.

Sincerely,

Rick Snyder
Governor

cc: Mr. Robert Kaplan, Deputy Regional Administrator, USEPA, Region 5
Mr. Dan Wyant, Director, MDEQ
Mr. Jim Sygo, Chief Deputy Director, MDEQ

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
EXECUTIVE DIVISION

INFORMATION TRANSMITTAL AND REQUEST FOR GOVERNOR'S ACTION

TO: Governor Rick Snyder via Jean Hall

FROM: Dan Wyant, Director

DATE: November 3, 2015

SUBJECT: Task Force Point of Contact Designation Letter to Susan Hedman, Regional Administrator, United States Environmental Protection Agency, Region 5

Action Taken by DEQ (action requested of Governor's Office in parentheses)
☒ Letter (for Governor's signature – draft attached)
☐ Printed Material (for Governor's signature – attached)
☐ Proclamation Request (for Governor's signature – draft attached)
☐ Telephone Call (for Governor's information – explanation given under "Situation Description")
☐ Other:

Governor's Action Requested By: November 16, 2015

Situation Description: During an October 20 conference call between the USEPA and DEQ regarding USEPA's establishment of the Flint Safe Drinking Water Task Force, the USEPA requested that Governor Snyder designate a DEQ point of contact for the Task Force. Attached are a draft letter to be signed by Governor Snyder, the October 21 Flint Drinking Water Action Plan Update regarding the conference call, and USEPA's October 16 press release regarding the establishment of the Task Force. Please contact Karen Shaler, Executive Division, DEQ, at shalerk@michigan.gov when the letter is ready to be picked up. Thank you.

Contact Person's Name: Jim Sygo, Chief Deputy Director
DEQ Division/Office: Executive Division
Telephone: 517-284-6709
E-Mail Address: sygoj@michigan.gov

Governor's Response (for Governor's Office use only):

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- Action Step #1 has been incorporated into the After Action Plan (Action Step #4).

- It was determined that the information in Action Step #10 would be communicated better in person and has, therefore, been incorporated into Action Step #13.

- DEQ staff has tentatively identify the week of October 26 to meet with representatives from the remaining 10 locations in the Flint Community Schools who were not present at the October 16 meeting at the Superintendent's office.

- DEQ staff has contacted DHHS to request a meeting regarding lead education materials for schools.

- The first plumbing assessment has been scheduled for Friday, October 23. The subsequent sampling of the first facility has been scheduled for Saturday, October 24. This decision was made jointly among DEQ, DLARA, and DHHS in an effort to ensure that sampling staff could properly evaluate the sampling protocol without the added pressure of completing the sampling process before students arrived on-site.

- The DEQ Laboratory has created a fillable PDF form for use in the school sampling protocol. This form was created to streamline the information gathering process. The form was submitted for review by staff in DEQ, DHHS, and DLARA, and comments were subsequently incorporated. The form is now complete and ready for use.

- The corrosion control treatment plan (CCTP) and permit application were received late last Friday, October 16, and were reviewed. Our review comments were provided to Flint's consultant [Lockwood, Andrews & Newnam, Inc. (LAN)]. The CCTP was forwarded to EPA on October 16, and their comments were received on October 19. A conference call was held on October 20 between our staff and Darren Lytle and Michael Schock of EPA to discuss the main comments (EPA's and DEQ's) to confirm that both agencies concur with the design and proposed corrosion control dosages. We are currently preparing a revised set of comments, based on our discussion with EPA. The revised comments will be sent to EPA to confirm concurrence before sending to LAN.

- An Act 399 permit will be issued to the city of Flint to install corrosion control treatment following receipt of revised plans, specs, and – as needed – a permit application that addresses the revised review comments.

- DEQ staff has contacted DHHS to schedule a meeting to discuss the development of childcare facility guidance. This guidance will be similar in nature to what is being done in schools but will be tailored to address the specific

concerns with younger children and the smaller plumbing infrastructure of typical childcare facilities.

Additional Actions:

- Standing meetings with the city of Flint have been scheduled for Fridays at 10:00 a.m. These meetings have been scheduled through December 18. In addition, a tour of the Flint Water Treatment Plant has been scheduled for October 23. The DEQ be taking video footage of the tour, showing the coordinated efforts being taken by the city of Flint, DEQ, DHHS, and DLARA. Genesee County Health Department (GCHD) has been invited to the Friday meetings as well as the tour, and GCHD is in the process of determining if they can participate.

- A meeting was held between staff from the DEQ, DLARA, and DHHS to discuss details regarding the flow and coordination of efforts for the school sampling protocol. It was mutually agreed that it was best to only do one school at first so that we can ensure that the process runs smoothly from partner to partner. The first plumbing evaluation will be done at Freeman Elementary School on Friday, October 23. Steve Busch of the DEQ will accompany staff from DLARA to answer questions they might have during their plumbing evaluations. The subsequent water sampling effort will take place the next day, on Saturday, October 24. It was agreed that taking the samples on Saturday would allow staff to be able to evaluate the sampling process without the added pressure of ensuring that the sampling was complete before students arrived at the building.

- DEQ Director Dan Wyant, Jim Sygo, George Krisztian, and Karen Tommasulo held a conference call with Dr. Susan Hedman, EPA's Regional Administrator, and other representatives from EPA to discuss the EPA's formation of the Flint Safe Drinking Water Task Force. The purpose of the Task Force is to provide one-stop shopping for technical assistance for the optimization of corrosion controls for the switch from Detroit Water and Sewerage Department to the Karegnondi Water Authority. EPA requested a point of contact for the DEQ, and Director Wyant suggested Chief Deputy Director Jim Sygo. EPA agreed that this was an appropriate choice and requested a formal letter indicating Chief Deputy Director Sygo as the point of contact.

- DHHS has indicated that the total water filter/pitcher distribution for the period of October 6 through October 20 was 9,373 units.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: [redacted]
Cell: [redacted]
October 21, 2015

Shaler, Karen (DEQ)

From: Thelen, Mary Beth (DEQ)
Sent: Friday, October 16, 2015 5:40 PM
To: Krisztian, George (DEQ); Sygo, Jim (DEQ); Shekter Smith, Liane (DEQ)
Cc: Shaler, Karen (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: FW: EPA Establishes Safe Drinking Water Task Force to Provide Expertise to MDEQ and City of Flint

FYI.

From: Josh Singer [mailto:noreply-subscriptions@epa.gov]
Sent: Friday, October 16, 2015 12:18 PM
To: Olszewski, Rosemarie (DEQ)
Subject: EPA Establishes Safe Drinking Water Task Force to Provide Expertise to MDEQ and City of Flint

Contact Information: Anne Rowan, rowan.anne@epa.gov 312-353-9391

For Immediate Release No. 15-OPA160

EPA Establishes Safe Drinking Water Task Force to Provide Technical Expertise to MDEQ and City of Flint

Task Force providing technical assistance on reconnecting the Flint drinking water system to a new source

CHICAGO (October 16, 2015) - Today U.S. Environmental Protection Agency Region 5 Administrator Susan Hedman established the Flint Safe Drinking Water Task Force to provide the Agency's technical expertise through regular conversations with designated officials from Michigan Department of Environmental Quality (MDEQ) and the City of Flint. The Task Force will be led by the Region 5 Deputy Regional Administrator and will assist with developing and implementing a plan to secure water quality, including measures to optimize corrosion control. Task Force members will be available to consult with MDEQ and the City of Flint on site in Flint. The Task Force will also coordinate as necessary with federal, state and local public health agencies to assist with protection of public health.

Specifically, the Task Force will provide technical assistance to the MDEQ and the City of Flint to reconnect the Flint system to a new source of drinking water (to be supplied by the Great Lakes Water Authority) and to optimize corrosion control for the Flint system, starting in October 2015. The Task Force will also provide technical assistance to the MDEQ and the City of Flint, as needed, in advance of and following connection of the Flint water system to a new source of drinking water (to be supplied by the Karegnondi Water Authority) and to optimize corrosion control for the Flint system, starting in 2016.

"EPA is committed to working with our state and local partners to ensure a safe and reliable drinking water supply for the residents of Flint, Michigan," Hedman said. "The formation of this task force continues our commitment to providing technical assistance to the City of Flint and the State of Michigan."

The Task Force will be comprised of scientists and technical experts from the EPA Region 5 office in Chicago, the National Risk Management Research Lab in Cincinnati and the EPA drinking water program. In addition, EPA will ask the Governor to designate a MDEQ official and the Mayor of Flint to designate a city official, to serve as points of contact for the Task Force.

From: Stoken, Laura (GOV)
Sent: Friday, October 16, 2015 8:34 AM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Cc: Brownfield, Michael (GOV); Adler, Ari (GOV)
Subject: RE: Lead Poisoning Proc

Hey There,

MDHHS requested on September 18th the Governor to issue a proclamation for Lead Poisoning Awareness Prevention and Prevention Week (October 25 – October 31). Given recent events I am not sure this is something we want to be issuing.

We did issue this proclamation in 2012 and 2014.

I am going to decline the proclamation unless you think this is something we should be doing.

Thanks,

Laura

From: Kica, Beata (GOV)
Sent: Friday, October 16, 2015 8:20 AM
To: Stoken, Laura (GOV) <StokenL@michigan.gov>
Subject: Lead Poisoning Proc

Hi Laura,

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Thanks!
Beata

From: Stoken, Laura (GOV)
Sent: Friday, October 16, 2015 10:42 AM
To: Kica, Beata (GOV)
Subject: RE: Lead Poisoning Proc

Please regret this proclamation

From: Kica, Beata (GOV)
Sent: Friday, October 16, 2015 8:20 AM
To: Stoken, Laura (GOV) <Stokenl@michigan.gov>
Subject: Lead Poisoning Proc

Hi Laura,

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Thanks!
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From: Stoken, Laura (GOV)
Sent: Tuesday, December 29, 2015 3:02 PM
To: Weir, Elizabeth (GOV); Kras, Jason (GOV); Byrd, John (GOV); Robinson, Judy (GOV); Kica, Beata (GOV)
Cc: Murray, David (GOV)
Subject: Fwd: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hi team,

Please hold response to Flint water correspondence until an updated letter can be determined with Comms.

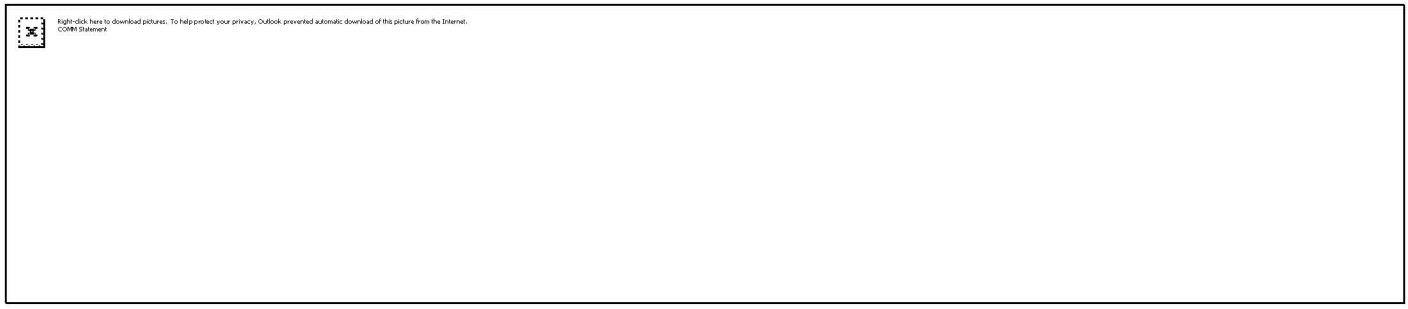
Thank you,

Laura

Sent from my iPhone

Begin forwarded message:

From: GOV Newsroom <govnewsroom@govsubscriptions.michigan.gov>
Date: December 29, 2015 at 2:44:53 PM EST
To: <stokenl@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force
Reply-To: <govnewsroom@govsubscriptions.michigan.gov>



Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Changes to take place at DEQ, meeting planned with Mayor Karen Weaver

In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:

"When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

"The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force's final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

"We'll continue to work with the community members to make sure we hear and respond to their concerns.

"In addition, MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to address problems cited by the task force.

"But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term.

"I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.

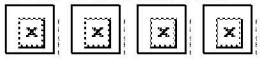
"I know many Flint citizens are angry and want more than an apology. That's why I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss other ways the state can offer assistance.

"These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of

life, we're committed to doing everything we can to protect the well-being of our citizens."

###

STAY CONNECTED:



This email was sent to stokenl@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Stoken, Laura (GOV)
Sent: Tuesday, December 29, 2015 3:02 PM
To: Weir, Elizabeth (GOV); Kras, Jason (GOV); Byrd, John (GOV); Robinson, Judy (GOV); Kica, Beata (GOV)
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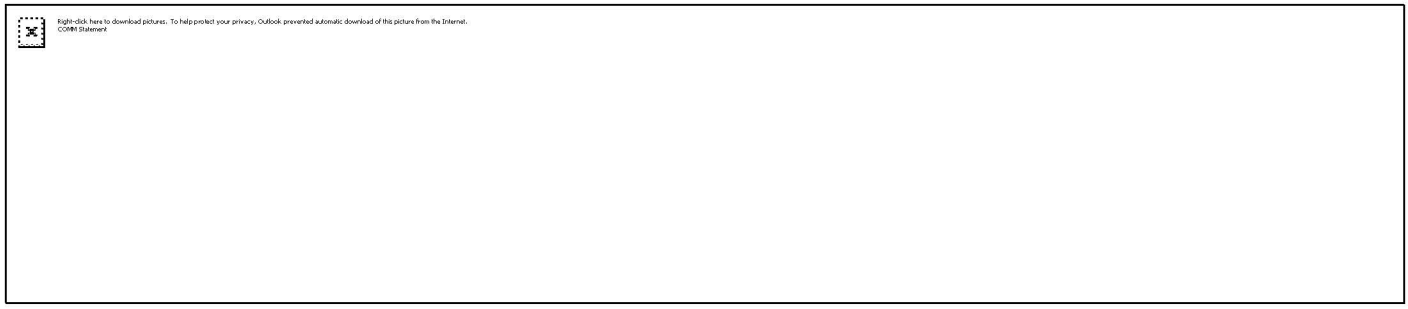

Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

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"We'll continue to work with the community members to make sure we hear and respond to their concerns.

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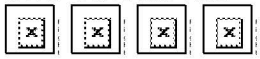
###

STAY CONNECTED:



This email was sent to stokenl@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Muchmore, Dennis (GOV)
Sent: Monday, September 14, 2015 5:07 PM
To: Roberts, John (DTMB)
Cc: Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Posthumus, Dick (GOV); Hollins, Harvey (GOV)
Subject: FW: Flint Water Request
Attachments: Flint Mayor Water Request.pdf

Great, we have a lot of money laying around...

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Monday, September 14, 2015 4:17 PM
To: GovernorsOffice [redacted] Snyder, Rick (GOV) <[redacted]>
Cc: Joshua Freeman <jfreeman@cityofflint.com>; senjananich@senate.mi.gov; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Phil Phelps <philphelps@house.mi.gov>; SheldonNeeley@house.mi.gov; Hedman, Susan <Hedman.susan@epa.gov>; Natasha Henderson <nhenderson@cityofflint.com>
Subject: Flint Water Request

Dear Governor,
I am renewing my call for additional funding to address Flint's water challenges. While significant progress has been made, with the fiscal stress and pending lawsuits against the City, there is a gap in the funds necessary to meet the adopted capital improvement plan and to respond to new needs with lead pipes. Attached is a letter of request. I thank you in advance for your willingness to review.

Sincerely,
Mayor Walling

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

CITY OF FLINT

Dayne Walling
Mayor

September 14, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Call for Additional Support for Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing with a renewed request for additional support to address Flint's water challenges to ensure that water is affordable and secure for everyone in Flint especially our vulnerable populations. I am asking for an additional $30 million in funds for Flint's infrastructure and a new healthy homes initiative.

Significant progress has been made throughout this year to increase water safety and quality and I thank you for the involvement of your office, the Michigan Department of Environmental Quality, and the Michigan Department of Treasury. A majority of items in the Water Improvement Plan are completed or underway. Most importantly, Flint is now in compliance with the Safe Drinking Water Act due in large part to the installation of the new carbon filter. The infrastructure systems are being made more secure and efficient through the State grants. Now the City is committed to following the recommendation of the Michigan Department of Environmental Quality to optimize the treatment process, reduce corrosion and further minimize risks from lead.

The need to accelerate the City's capital improvement investments remains and has been further increased by the continued financial stress and legal issues. Previously I requested support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community and the gap in funding in the adopted capital improvement plan. I understand that the existing federal law does not allow the existing Drinking Water Revolving Loans that Flint is carrying to be forgiven in retrospect but the need still exists. Flint owes approximately $20 Million. One solution is for the State to grant a new $20 Million that is designed as forgivable from the start. Another solution is to provide

equivalent funding through an expansion of the grant program to Michigan's Financially Distressed Cities, Villages and Townships with a supplemental budget amendment in cooperation with the State Legislature.

The community's heightened concern about lead leeching into the water from old service lines and home plumbing also needs to be addressed. We know that lead is an environmental contaminant and there have been many programs in place over the years to address sources in paint and pipes. Flint needs a new healthy homes initiative specifically focused on lead in water with $10 Million to start the process of replacing service lines for the most vulnerable households. Regardless of the source and treatment of Flint's water, this long term threat of lead in pipes needs to be removed in the interest of public health.

My approach continues to be to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and State and Federal government personnel. We need every available expert and resource to address Flint's water problems.

Flint's safety is my top priority. Just as the City and State have worked together on public safety, we need additional support for fixing the water problems. We need $30 Million in new funds to repair and update the city-wide infrastructure and to assist households in becoming lead-free. The entire Flint community deserves sustainable, safe, secure and affordable water now and into the future. Thank you for the consideration Governor and I look forward to future discussions.

Sincerely,

Dayne Walling
Mayor, City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; EPA Regional Administrator Dr. Susan Hedman; Chief of Staff Dennis Muchmore

CITY OF FLINT

Dayne Walling
Mayor

January 18, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing to convey serious concerns about water quality and to request your support for my proposed Flint Water Improvement Plan. Access to safe and clean water is a basic human right, and, therefore, policy and budget decisions need to ensure that water is affordable and secure for everyone in Flint and all across Michigan. It is essential there is City, State and Federal cooperation to address the challenges here and to meet the needs of vulnerable populations.

The Flint Water Improvement Plan is focused in five areas: safety, quality, access, investment and education. The plan puts safety and quality first because this is fundamental. It is designed to be a sustainable solution for the City of Flint and the community as we move towards a new permanent water supply from Lake Huron through the Karegnondi Water Authority. My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the State and Federal levels.

Safety & Quality

- 100% Safety is the standard
- City of Flint reports testing data to the public to assure safety and expands testing sites and frequency
- Bring on experienced river water treatment operational management in the City of Flint

Access

- Announce an amnesty program for Flint water service turn-ons and reduce the turn-on fee
- Develop a revised affordable payment plan policy to encourage customers to return
- Design Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for the elderly and vulnerable families

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State investments
    - State approves City of Flint's Distressed Cities Fund applications

- Federal and State support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community
- Federal and State grants for infrastructure improvements in alignment with the Flint Master Plan.

- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

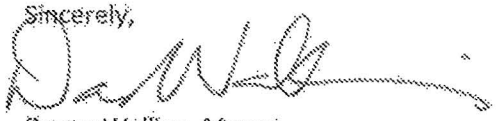
- Develop a community partnership with universities to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information and water assistance with the Keep the Water Flowing Fund and support services
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

It is also critical to restore the public confidence in Flint Water. The implementation of this plan must be accompanied by extensive community engagement including local elected officials. My objective is to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and government personnel.

It is imperative that we communicate better and provide residents more information. I understand representatives from the Michigan Department of Environmental Quality will be joining a public forum this week at City Hall. This engagement going forward is vital so thank you for supporting their efforts. I think this issue of transparency is important for communities all across the State. I recommend a review of the applicable laws and policies and, at a minimum, a new requirement that water testing data be reported publicly no less than quarterly by law in all Michigan communities in Flint's population category.

Thank you for the consideration Governor. There is nothing more important in Flint right now than fixing the water problems. We must work together to identify funds to repair and update the water treatment facilities and city-wide infrastructure and to help those persons without access to clean water so that the entire Flint community has sustainable, safe, secure and affordable water now and into the future. This is an important issue for the state of our State of Michigan and I urge you to work with us to implement solutions.

Sincerely,



Dayne Walling, Mayor
City of Flint

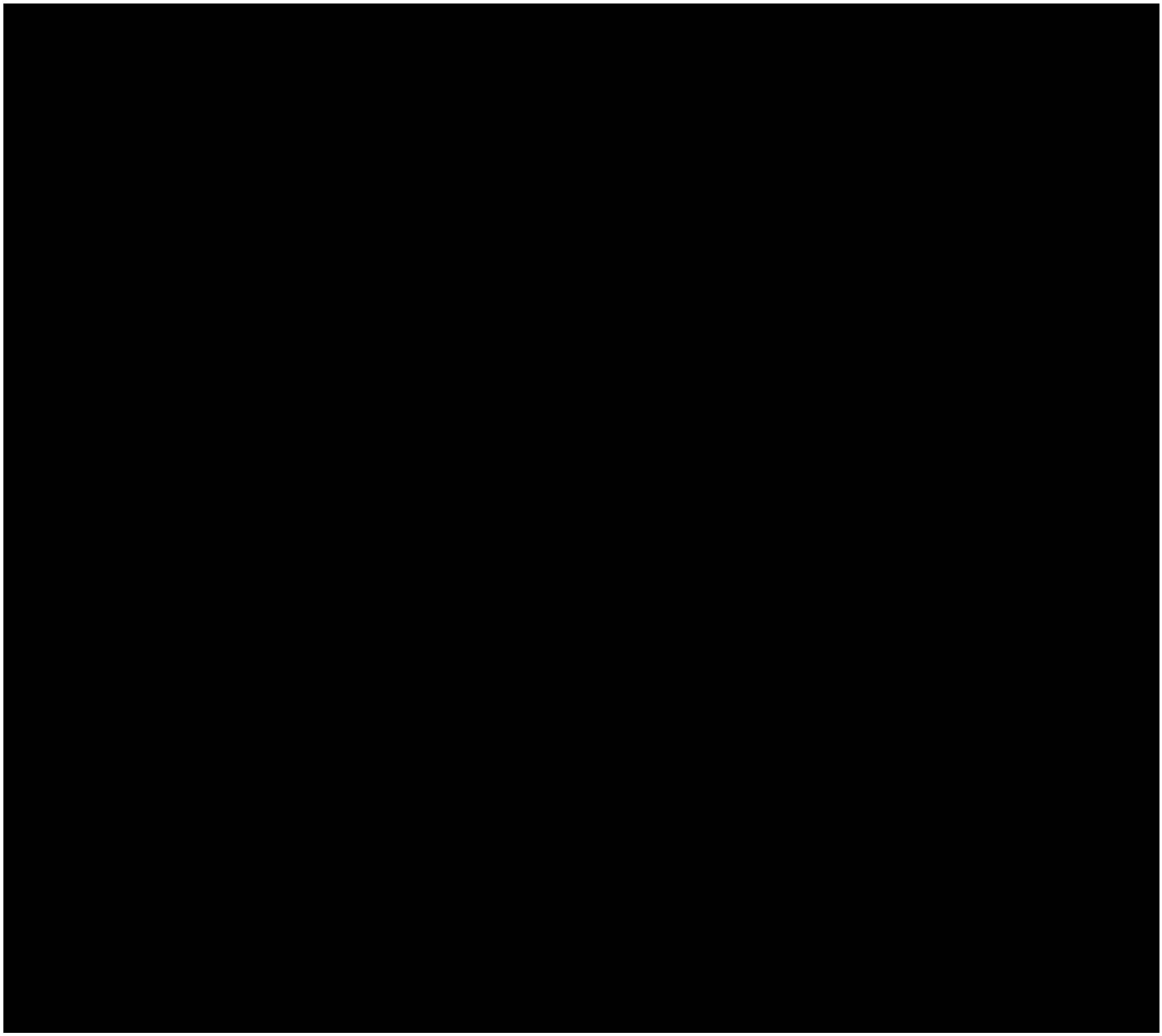
CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; Flint Emergency Manager Jerry Ambrose

From: Ackerman, Darin (GOV)
Sent: Monday, November 16, 2015 12:02 PM
To: Posthumus, Dick (GOV)
Subject: 11-16-15 Senior Staff Overview

Hi Dick,

Hopefully you bagged one this morning!

Here's some bullets from today's Senior Staff meeting:



[redacted]

Hollins (OUI) – Flint - we are working with the new Mayor (Weaver) to implement a public relations strategy to help pass long information to citizens. Kildee sent another letter to the Governor asking him to do more to address the issue, and it is unlikely this pattern will stop. There was a suit filed on Friday afternoon (I didn't catch by whom) saying the state violated due process rights when Flint switched from Detroit's water system. There are efforts underway to set up a meeting between the Governor and Mayor Weaver for relationship-building purposes.

Other/Round Robin:

[redacted]

Let me know if you need more details on any of the items.

Thanks,

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Posthumus, Dick (GOV)
Sent: Tuesday, December 29, 2015 2:41 PM
To: Wyant, Dan (DEQ)
Subject: FW: Flint water statement

FYI. You will be missed by the State of Michigan and this administration. I wish you well. I know you will be a success in whatever you choose to do.
Dick

From: Posthumus, Dick (GOV)
Sent: Tuesday, December 29, 2015 2:38 PM
To: senameekhof@senate.michigan.gov; kevin ([redacted]>
Cc: rdevries@senate.michigan.gov; Brock Swartzle (BSwartzle@house.mi.gov) <BSwartzle@house.mi.gov>
Subject: FW: Flint water statement

Senate Majority Leader and Mr. Speaker;
Below is a statement being released today relative to the Flint water. Please take note that the Governor reluctantly accepted Dan Wyant's resignation as the Director of DEQ. He is a great public servant who totally turned the culture of the DEQ around during his tenure. He will be missed.
Dick

From: Holland, Meegan (GOV)
Sent: Tuesday, December 29, 2015 1:21 PM
To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Walsh, John (GOV) <WalshJ@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Clement, Elizabeth (GOV) <clemente@michigan.gov>; Scott, Allison (GOV) <scotta12@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Calley, Brian (GOV) <[redacted]; Redford, James (GOV) <RedfordJ@michigan.gov>
Subject: Flint water statement

Here is a statement from the Governor that will go out around 2-2:30 p.m. to the media. We'll also give a heads up to executive staffers and some others. - Meegan

---

When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials.

Although the task force's final report is not yet completed, it has made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

We'll continue to work with the community members to make sure we hear and respond to their concerns.

In addition, MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to address problems cited by the task force.

But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term.

I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.

I know many Flint citizens are angry and want more than an apology. That's why I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss other ways the state can offer assistance.

These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we're committed to doing everything we can to protect the well-being of our citizens.

Meegan Holland
Director of Communications for Gov. Rick Snyder
Office: 517-335-6397
[redacted]
Twitter: @meholland

From: Paciorek, Josh (GOV)
Sent: Wednesday, September 30, 2015 2:23 PM
To: Wurfel, Sara (GOV)
Subject: FW: Tips and current action steps
Attachments: 151001. Action plan.docx

From: Tommasulo, Karen (DEQ)
Sent: Wednesday, September 30, 2015 1:19 PM
To: Paciorek, Josh (GOV) <Paciorekj@michigan.gov>
Subject: Tips and current action steps

Action plan attached. I'll keep you updated if wording changes.

Tips:

Flush your cold water pipes before use, and use only water from the cold water tap for drinking, cooking and especially for making baby formula.

- Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
- It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.
    - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
    - In the city of Flint, running the water for 5 minutes only costs about 3 cents.
- Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

Karen Tommasulo
Public Information Officer
Michigan Department of Environmental Quality
[redacted] | [redacted]
tommasulok@michigan.gov

Flint Drinking Water Action Plan

Immediately test all Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.

Expand water testing of at-risk properties.

Offer water testing at no cost to Flint residents to assure water is safe.

Speed up the implementation of fully optimized corrosion controls in the Flint drinking water system.

Convene the city's safe drinking water "Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.

Gov. Rick Snyder names Dr. Eden Wells as the Flint Drinking Water Public Health Advisor.

Continue to disseminate advisories recommending residents flush their cold water pipes before use, as well as use only water from the cold water tap for drinking, cooking and especially for making baby formula.

Provide filters to residences of Flint.

Offer premixed formula if test results indicate high levels of lead.

Accelerate water system improvements to address replacement of lead service lines.

Expedite Completion of Karegnondi Water Authority.

Facilitate conversation between the City of Flint and DSWD.

From: Maxine Murray <mmurray@cityofflint.com>
Sent: Friday, August 22, 2014 10:09 AM
To: Smith, Paul (GOV)
Subject: Re: Conference Call Agenda

Good morning Mr. Smith,

I have added you to the group. If I can be of further assistance, feel free to contact me.

Thanks you.

--
Maxine Murray
Executive Assistant to
Mayor Dayne Walling
Darnell Earley, Emergency Manager
1101 S. Saginaw Street
Flint, MI 48502
810.237.2035 Telephone
810.766.7218 Fax

On Fri, Aug 22, 2014 at 9:14 AM, Smith, Paul (GOV) <SmithP29@michigan.gov> wrote:
Ms. Murray,

I work in Governor Snyder's office. I would like to be invited to these calls going forward if that is possible. Thank you!

Sent from my iPad

Begin forwarded message:

From: Maxine Murray <mmurray@cityofflint.com<mailto:mmurray@cityofflint.com>>
Date: August 19, 2014 at 2:36:14 PM EDT
To: <byrner1@michigan.gov<mailto:byrner1@michigan.gov>>,
<kappg@michigan.gov<mailto:kappg@michigan.gov>>,
<muchmored@michigan.gov<mailto:muchmored@michigan.gov>>,
<robertsj9@michigan.gov<mailto:robertsj9@michigan.gov>>,
<wests2@michigan.gov<mailto:wests2@michigan.gov>>, "Angela Dempkowski (Treasury)"
<DempkowskiA@michigan.gov<mailto:DempkowskiA@michigan.gov>>, "Baird, Richard (GOV)"
<bairdr@michigan.gov<mailto:bairdr@michigan.gov>>, "Brian Larkin (GOV)"
<larkinb@michigan.gov<mailto:larkinb@michigan.gov>>, "Darnell Earley"
<dearley@cityofflint.com<mailto:dearley@cityofflint.com>>, "Deasy, Thomas (MSP)"
<deasyt@michigan.gov<mailto:deasyt@michigan.gov>>, "Edward Koryzno (Treasury)"
<koryznoe@michigan.gov<mailto:koryznoe@michigan.gov>>, "Elizabeth Clement (GOV)"

<clemente@michigan.gov<mailto:clemente@michigan.gov>>, Elizabeth Murphy
<emurphy@cityofflint.com<mailto:emurphy@cityofflint.com>>, "Etue, Kriste (MSP)"
<EtueK@michigan.gov<mailto:EtueK@michigan.gov>>, "Harvey Hollins (GOV)"
<hollinsh@michigan.gov<mailto:hollinsh@michigan.gov>>, James Tolbert
<jtolbert@cityofflint.com<mailto:jtolbert@cityofflint.com>>, Jerry Ambrose
<gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>, "Josephine Klotz (MSP)"
<KlotzJ@michigan.gov<mailto:KlotzJ@michigan.gov>>, "Lee, Nichole (MSP)"
<leen3@michigan.gov<mailto:leen3@michigan.gov>>, "McGowan, Emmitt (MSP)"
<McGowanE1@michigan.gov<mailto:McGowanE1@michigan.gov>>, "Sands, Thomas (MSP)"
<sandst@michigan.gov<mailto:sandst@michigan.gov>>, "Sipes, Stephen (MSP)"
<sipess@michigan.gov<mailto:sipess@michigan.gov>>, "Stephen O'Neill (MSP)"
<ONeillS@michigan.gov<mailto:ONeillS@michigan.gov>>, "Thomas Saxton (Treasury)"
<SaxtonT@michigan.gov<mailto:SaxtonT@michigan.gov>>, "Wayne Workman (TREASURY)"
<WorkmanW@michigan.gov<mailto:WorkmanW@michigan.gov>>
Subject: Conference Call Agenda

Good afternoon,

Please find attached the agenda for the Wednesday, August 20th, 9:00 am conference call.

Thank you.

--
Maxine Murray
Executive Assistant to
Mayor Dayne Walling
Darnell Earley, Emergency Manager
1101 S. Saginaw Street
Flint, MI 48502
810.237.2035 Telephone
810.766.7218 Fax

From: Kelenske, Chris (MSP)
Sent: Tuesday, January 05, 2016 1:05 PM
To: Smith, Paul (GOV)
Subject: Declaration Proclamation for Review
Attachments: 2016-01-05 Flint Water Governor's Declaration DRAFT.docx

Paul

We have looked at this a few times so please double check it. A few notes:

- I removed the reference we had to a public health emergency as DHHS advised me there really is no such thing.
- The Oct. 1 date is what we used in the 7th paragraph (that is when they declared a "public health emergency"). This date was also reference in Flints IAP they wrote.
- If signed today, we are including todays date in the 28 day timeframe this would be in effect which would put the 28th day on February 1, 2016.

Chris

Capt. Chris A. Kelenske
Deputy State Director/Commander
Emergency Management and Homeland Security Division
Michigan State Police
4000 Collins Road
Lansing, MI 48910
(517) 333-5042

"A PROUD tradition of SERVICE through EXCELLENCE, INTEGRITY, and COURTESY."

PROCLAMATION

DECLARATION OF EMERGENCY

WHEREAS, Section 1 of Article V of the Michigan Constitution of 1963 vests the executive power of the state of Michigan in the Governor; and

WHEREAS, under the Emergency Management Act, Act No. 390 of the Public Acts of 1976, as amended, MCL 30.401 to 30.421, the Governor is responsible for coping with dangers to this state or the people of this state presented by a disaster or emergency or threat thereof, and may issue executive orders, proclamations, and directives having the force and effect of law to implement the Act; and

WHEREAS, under Section 3 of the Emergency Management Act, 1976 Public Act 390, MCL 30.403, the Governor shall, by executive order or proclamation, declare a state of emergency if the Governor finds that an emergency has occurred or that the threat of an emergency exists; and

WHEREAS, on April 25, 2014 the City of Flint, Michigan switched from the Detroit water system to the Flint River as a water source, the harmful effects of corrosive water struck the city's water infrastructure, causing significant leaching of lead into the water which caused extensive damage to the water system and negative health impacts to the citizens; and

WHEREAS, the area affected includes the entire City of Flint, within the County of Genesee; and

WHEREAS, the damaged water infrastructure and leaching of lead into the city's water caused widespread damage to public and private water infrastructure, elevated blood lead levels in humans and potentially pets, especially in the population of children and pregnant women, and causing an immediate threat to public health and safety and disrupting vital community services; and

WHEREAS, from October 1, 2015 to this date, the County of Genesee and the City of Flint have taken a number of actions to cope with the situation, including but not limited to switching back to the Detroit water system on October 16th, declaring local states of emergency, activating the emergency response and recovery aspects of their emergency operations plan, marshaling and distributing required resources on a city-wide level, and issuing emergency public information and bulletins; and

WHEREAS, local resources have been insufficient to address the situation, and additional assistance from voluntary organizations and the state is required to protect public health, safety, and property, and to lessen or avert the threat of more severe and long lasting impacts to the community;

NOW, THEREFORE, I, RICHARD D. SNYDER, Governor of the State of Michigan, pursuant to the Constitution of the State of Michigan and provisions of Act No. 390 of the Public Acts of 1976, as amended, do hereby proclaim that a state of emergency exists in the aforementioned county and municipality; and

FURTHER, the Emergency Management and Homeland Security Division of the Department of State Police shall coordinate and maximize all state efforts, and may call upon all state departments to utilize resources at their avail to assist in the emergency area pursuant to the Michigan Emergency Management Plan; and

FURTHER, termination of this emergency will occur at such time as the threats to public health, safety, and property caused by the emergency no longer exist and appropriate programs have been implemented to recover from the effects of this emergency, but in no case longer than February 1, 2016, unless extended as provided by Act No. 390.

Given under my hand and the
Great Seal of the State of Michigan this
5th day of January in the Year of Our
Lord, Two Thousand and Sixteen.

_____

RICHARD D. SNYDER
GOVERNOR

BY THE GOVERNOR:

_____

SECRETARY OF STATE

JOIN THE MSP

From: Arwood, Cheri (GOV)
Sent: Tuesday, January 05, 2016 4:18 PM
To: Scott, Allison (GOV); Smith, Paul (GOV); Murray, David (GOV); Kelenske, Chris (MSP); Redford, James (GOV); Baird, Richard (GOV); Agen, Jarrod (GOV); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Subject: RE: Proclamation
Attachments: 2016-01-05 Flint Water Governor's Declaration Final.pdf

Please see attached.

Cheri

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

PROCLAMATION

DECLARATION OF EMERGENCY

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WHEREAS, under the Emergency Management Act, Act No. 390 of the Public Acts of 1976, as amended, MCL 30.401 to 30.421, the Governor is responsible for coping with dangers to this state or the people of this state presented by a disaster or emergency or threat thereof, and may issue executive orders and proclamations, having the force and effect of law to implement the Act; and

WHEREAS, under Section 3 of the Emergency Management Act, 1976 Public Act 390, MCL 30.403, the Governor shall, by executive order or proclamation, declare a state of emergency if the Governor finds that an emergency has occurred or that the threat of an emergency exists; and

WHEREAS, on April 25, 2014 the City of Flint, Michigan switched from the Detroit water system to the Flint River as a water source, the harmful effects of untreated water struck the city's water infrastructure, causing leaching of lead into the water which caused damage to the water system and potential negative health impacts to the citizens; and

WHEREAS, the area affected includes parts of the City of Flint, within the County of Genesee; and

WHEREAS, the damaged water infrastructure and leaching of lead into the city's water caused damage to public and private water infrastructure, and has either caused or threatened to cause elevated blood lead levels, especially in the population of children and pregnant women, and causing a potential immediate threat to public health and safety and disrupting vital community services; and

WHEREAS, from October 1, 2015 to this date, the County of Genesee and the City of Flint have taken a number of actions to cope with the situation, including but not limited to, switching back to the Detroit water system on October 16th, declaring local states of emergency, activating the emergency response and recovery aspects of their emergency operations plan, marshaling

and distributing required resources on a city-wide level, and issuing emergency public information and bulletins; and

WHEREAS, local resources have been insufficient to address the situation, and additional assistance from voluntary organizations and the state is required to protect public health, safety, and property, and to lessen or avert the threat of more severe and long lasting impacts to the community;

NOW, THEREFORE, I, RICHARD D. SNYDER, Governor of the state of Michigan, pursuant to the Constitution of the state of Michigan and provisions of Act No. 390 of the Public Acts of 1976, as amended, do hereby proclaim that a state of emergency exists in the aforementioned county and municipality; and

FURTHER, the Emergency Management and Homeland Security Division of the Department of State Police shall coordinate and maximize all state efforts, and may call upon all state departments to utilize resources at their avail to assist in the emergency area pursuant to the Michigan Emergency Management Plan; and

FURTHER, termination of this emergency will occur at such time as the threats to public health, safety, and property caused by the emergency no longer exist and appropriate programs have been implemented to recover from the effects of this emergency, but in no case longer than February 1, 2016, unless extended as provided by Act No. 390.

Given under my hand and the
Great Seal of the State of Michigan this
5th day of January in the Year of Our
Lord, Two Thousand and Sixteen.

RICHARD D. SNYDER
GOVERNOR

BY THE GOVERNOR:

SECRETARY OF STATE

FILED WITH SECRETARY OF STATE
ON 1/5/16 AT 4:00pm

From: Smith, Paul (GOV)
Sent: Tuesday, January 05, 2016 12:01 PM
To: Baird, Richard (GOV); 'Redford, James (GOV)'; Hollins, Harvey (GOV); 'Murray, David (GOV)'
Subject: FW: Recommendation for Governor's Declaration of an Emergency

Importance: High

Captain Kelenske will have a draft declaration ready within the next hour. I will wait until the draft is ready to forward this to the Governor so that we can get it done within a single email.

From: Kelenske, Chris (MSP)
Sent: Tuesday, January 05, 2016 11:36 AM
To: Smith, Paul (GOV) <SmithP29@michigan.gov>
Cc: Etue, Kriste (MSP) <EtueK@michigan.gov>; Gorski, Gary (MSP) <GorskiG@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Leix, Ron (MSP) <LeixR@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Banner, Shanon (MSP) <BannerS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Holland, Meegan (GOV) <HollandM2@michigan.gov>
Subject: Recommendation for Governor's Declaration of an Emergency
Importance: High

Paul

On January 4, 2016, Genesee County requested that a "State of Emergency/Disaster" be issued by Governor Snyder. I have reviewed the situation with key EMHSD staff and we conclude that a recommendation for declaration of a State of Emergency is warranted based on the following factors:

- The situation is sufficiently widespread and severe.
- The situation adversely impacts public health, safety and welfare. The presence of lead in drinking water has been documented. The full extent and required remediation remain unknown.
- The potential fiscal impact to the city of Flint is severe. The current situation poses an extraordinary financial burden.
- The city and county do not possess the technical expertise to fully identify impacts and remediation.

EMHSD also recommends activation of the SEOC which will include:

- Attendance by all state agencies;
- Situation Reports by all state agencies for situational awareness and to develop a common operating picture;
- Technical briefings by MDEQ and MDHHS on the situation.

Following initial SEOC briefings, state agencies must determine (in consultation with the state director of EMHS) if they need to play a role in ongoing SEOC operations to contribute to addressing the Flint water issue. At minimum, the following agencies should maintain a presence in the SEOC during the operational period: MDEQ, MDHHS, MI Department of Education, DTMB, Department of Talent and Economic Development, and MDARD. The SEOC operational period is to be determined but will at minimum be 8-5 Monday through Friday.

The initial focus of the SEOC will be to:

- Identify and implement any needed protective actions to protect public health and safety;
- Develop situational awareness and common operating picture;
- Develop understanding of technical aspects;
- Coordinate damage assessment;

- Review resource requests;
- Coordinate public information; and
- Identify programs to assist in remediating damage.

Finally, EMHSD staff recommends:

- Activation of a Joint Information Center located in Flint which must include PIOs from Genesee County, the city of Flint, and other appropriate local agencies to participate.

ACTION ITEM: The Governor's Declaration of an Emergency is being drafted and will be initiated pending the Governor's approval of this recommendation and above actions.

Chris

Capt. Chris A. Kelenske
Deputy State Director/Commander
Emergency Management and Homeland Security Division
Michigan State Police
4000 Collins Road
Lansing, MI 48910
(517) 333-5042

"A PROUD tradition of SERVICE through EXCELLENCE, INTEGRITY, and COURTESY."

JOIN THE MSP

From: Smith, Paul (GOV)
Sent: Tuesday, January 05, 2016 2:36 PM
To: 'Kelenske, Chris (MSP)'
Subject: Revised Draft
Attachments: Edits to Emergency Declaration.pdf; 2016-01-05 Flint Water Governor's Declaration DRAFT 2.docx

Importance: High

Please look at the changes we have made and let me know if you are OK. Call if you have questions.

PROCLAMATION

DECLARATION OF EMERGENCY

WHEREAS, Section 1 of Article V of the Michigan Constitution of 1963 vests the executive power of the state of Michigan in the Governor; and

WHEREAS, under the Emergency Management Act, Act No. 390 of the Public Acts of 1976, as amended, MCL 30.401 to 30.421, the Governor is responsible for coping with dangers to this state or the people of this state presented by a disaster or emergency or threat thereof, and may issue executive orders and proclamations, having the force and effect of law to implement the Act; and

WHEREAS, under Section 3 of the Emergency Management Act, 1976 Public Act 390, MCL 30.403, the Governor shall, by executive order or proclamation, declare a state of emergency if the Governor finds that an emergency has occurred or that the threat of an emergency exists; and

WHEREAS, on April 25, 2014 the City of Flint, Michigan switched from the Detroit water system to the Flint River as a water source, the harmful effects of corrosive water struck the city's water infrastructure, causing leaching of lead into the water which caused damage to the water system and negative health impacts to the citizens; and

WHEREAS, the area affected includes the entire City of Flint, within the County of Genesee; and

WHEREAS, the damaged water infrastructure and leaching of lead into the city's water caused damage to public and private water infrastructure, and has either caused or threatened to cause elevated blood lead levels in humans, especially in the population of children and pregnant women, and causing a potential immediate threat to public health and safety and disrupting vital community services; and

WHEREAS, from October 1, 2015 to this date, the County of Genesee and the City of Flint have taken a number of actions to cope with the situation, including but not limited to, switching back to the Detroit water system on October 16th, declaring local states of emergency, activating the emergency response and recovery aspects of their emergency operations plan, marshaling and distributing required resources on a city-wide level, and issuing emergency public information and bulletins; and

WHEREAS, local resources have been insufficient to address the situation, and additional assistance from voluntary organizations and the state is required to protect public health, safety, and property, and to lessen or avert the threat of more severe and long lasting impacts to the community;

NOW, THEREFORE, I, RICHARD D. SNYDER, Governor of the state of Michigan, pursuant to the Constitution of the state of Michigan and provisions of Act No. 390 of the Public Acts of 1976, as amended, do hereby proclaim that a state of emergency exists in the aforementioned county and municipality; and

FURTHER, the Emergency Management and Homeland Security Division of the Department of State Police shall coordinate and maximize all state efforts, and may call upon all state departments to utilize resources at their avail to assist in the emergency area pursuant to the Michigan Emergency Management Plan; and

FURTHER, termination of this emergency will occur at such time as the threats to public health, safety, and property caused by the emergency no longer exist and appropriate programs have been implemented to recover from the effects of this emergency, but in no case longer than February 1, 2016, unless extended as provided by Act No. 390.

Given under my hand and the
Great Seal of the State of Michigan this
5th day of January in the Year of Our
Lord, Two Thousand and Sixteen.

_____
RICHARD D. SNYDER
GOVERNOR

BY THE GOVERNOR:

_____
SECRETARY OF STATE

From: Dillon, Andy (Treasury)
Sent: Sunday, March 17, 2013 6:56 PM
To: Snyder, Rick (GOV); Muchmore, Dennis (GOV)
Cc: Stibitz, Brom (Treasury); Saxton, Thomas (Treasury); Roberts, John (GOV)
Subject: Fwd: Flint Water Supply Alternatives
Attachments: TYJT Recommendaton DWSD vs Flint.pdf

Governor and Dennis,

Attached is the recommendation from the engineers we hired to advise us on the KWA project for Genesee/Flint. As you will see, they are recommending that Flint stay with DWSD. This has ramifications that merit further discussion. Dennis and Brom, can you schedule a mtg for follow up?

Thanks,

Andy

Sent from my iPad

Begin forwarded message:

> **From:** David Guastella <DGuastel@tyjt.com>
> **Date:** March 17, 2013 1:07:03 PM EDT
> **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Cc:** George Karmo <GKarmo@tyjt.com>, Awni Qaqish <aqaqish@tyjt.com>, "Hichez, Amy (Treasury)" <HichezA@michigan.gov>
> **Subject: Flint Water Supply Alternatives**
>
> Good afternoon Treasurer Dillon,
>
> As requested in our meeting on Friday, March 15th, I am attaching TYJT's recommendation regarding Flint's alternatives for water supply. Please do not hesitate to contact us should you have any questions or wish us to look into anything further regarding this issue.
>
> Thank you,
>
> Dave

STATE OF MICHIGAN CONTRACT NO. 271N3200089

CITY OF FLINT WATER SUPPLY ASSESSMENT

At the request of the Treasurer, Tucker, Young, Jackson, Tull, Inc. (TYJT) makes the following recommendation to the Department of Treasury concerning Flint's water supply alternatives. Based on the financial analysis performed of the various options presented by DWSD to continue treated water service to Flint compared to Flint being supplied by the new KWA untreated water system, TYJT believes that several of the options presented by DWSD are lower in cost currently and over the long run than the one offered by KWA. TYJT also believes that DWSD's most recent offer (subsequent to the submittal of our report) to build a smaller parallel water main from Imlay to Flint, funded by the entire DWSD base of customers, is the best solution offering the least cost alternative and the required redundancy by MDEQ.

Furthermore, since a majority of the KWA system has not been designed and none of the system has been constructed, there is an additional risk that the cost of the KWA system may actually be higher than estimated due to potential construction delays and unforeseen conditions. This risk to Flint could be substantial since the city is responsible for 30 percent of the KWA design and construction costs while still having to purchase water from DWSD during the construction period.

Finally, there are other issues that were identified in our report that may result in risks to Flint if it were to join KWA that should be considered by the Treasury in determining how Flint's potable water should be supplied. These issues are related to redundancy and reliability, other items affecting cost, and Flint's desire to control its own destiny related to its water supply. These are described further below.

- DWSD's supply to Flint is via a 72-inch water main from Imlay City. This main also supplies Imlay City, Mayfield and the Greater Lapeer County Utilities Authority (GLCUA). The volume of water contained within the 72-inch main is approximately 30 million gallons. If Genesee and Flint move to KWA then the three remaining communities' consumption would most likely not be large enough to maintain fresh water in DWSD's pipeline (due to loss of chlorine residual). DWSD may consider shutting down the 72-inch line completely due to the water quality concerns, which would then create an additional burden for Imlay, Mayfield and GLCUA to finance treated water supplies.
- The KWA supply option is counter to the Treasury's Competitive Grant Assistance Program (Formerly EVIP Grant). This program has been put in place to allow for communities to consolidate their services and save money. Two existing customers of DWSD (Flint and Genesee County) along with the potential of others customers (GLCUA, Mayfield, Imlay City) separating from another water system is in contradiction to the program.
- There is a concern over the ability of smaller systems (KWA) over larger systems (DWSD) to pay for future unfunded mandates and regulations. Obviously, identifying regulation requirements over 30 years is hard to determine. However, it is widely accepted that a large system has greater ability to respond to unfunded mandates because the cost can be distributed over a large customer base.
- Although Flint will be responsible for 30 percent of the construction cost, they will only have a minority vote on the KWA board. Furthermore, there are other communities (Lapeer County, the City of Lapeer, and Sanilac County) that sit on the board and vote. However, they are not purchasing water nor contributing to the construction costs. Their position on the KWA Board will not provide them an ability to "control their own destiny," as they have stated to the Treasury.

From: Dillon, Andy (Treasury)
Sent: Thursday, March 28, 2013 6:18 PM
To: Snyder, Rick (GOV); Muchmore, Dennis (GOV); Roberts, John (GOV); Wyant, Dan (DEQ)
Cc: Stibitz, Brom (Treasury); Fraser, Roger (Treasury); Saxton, Thomas (Treasury)
Subject: KWA

Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.

We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.

I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.

Regards,

Andy

Sent from my iPad

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 1:31 PM
To: Snyder, Rick (GOV)
Subject: FW: KWA

Both Dan and Andy believe that the discussions held in the past with DWSD and Flint have been contentious and not fruitful. What we are going to do is tell Flint that if they believe it is in Flint's interest they should sign and submit to Andy for his approval. Brom will tell them that. At the same time we will inform DWSD that this is happening and if they want to make a last attempt they should do so during the period of time that Andy is deliberating on his counter signature. Dan does not believe that DWSD has been straight and doesn't think they will offer anything and Andy concurs. Under any circumstances Flint will have to deal with DWSD on the present delivery system and that may create some negotiations but it's doubtful they will be significant.

We will encourage DWSD to make an attempt. We did call them together as recently as November to negotiate and those discussions were not successful. Andy and Dan will make one last effort.

-----Original Message-----
From: Dillon, Andy (Treasury)
Sent: Thursday, March 28, 2013 6:18 PM
To: Snyder, Rick (GOV); Muchmore, Dennis (GOV); Roberts, John (GOV); Wyant, Dan (DEQ)
Cc: Stibitz, Brom (Treasury); Fraser, Roger (Treasury); Saxton, Thomas (Treasury)
Subject: KWA

Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.

We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.

I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.

Regards,

Andy

Sent from my iPad

From: Dillon, Andy (Treasury)
Sent: Wednesday, April 17, 2013 4:16 PM
To: Snyder, Rick (GOV)
Cc: Muchmore, Dennis (GOV); Stibitz, Brom (Treasury); Roberts, John (GOV)
Subject: Fwd: KWA and City of Flint

Governor, Dennis indicated you wanted a DWSD KWA mtg. I am arranging it. Below is an email from Dan Wyant on the topic.

Sent from my iPad

Begin forwarded message:

> **From:** "Wyant, Dan (DEQ)" <WyantD@michigan.gov>
> **Date:** April 17, 2013, 10:45:45 AM EDT
> **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Subject: FW: KWA and City of Flint**
>
> Andy,
>
> More DEQ staff comments attached from this morning. Our analysis has not changed.
>
> Dan Wyant, Director
> Department of Environmental Quality
> 517-373-7917
>
> ---
>
> **From:** Thelen, Mary Beth (DEQ)
> **Sent:** Wednesday, April 17, 2013 10:43 AM
> **To:** Wyant, Dan (DEQ)
> **Subject:** FW: KWA and City of Flint
>
> ---
>
> **From:** Busch, Stephen (DEQ)
> **Sent:** Wednesday, April 17, 2013 9:51 AM
> **To:** Sygo, Jim (DEQ); Shekter Smith, Liane (DEQ); Thelen, Mary Beth (DEQ)
> **Cc:** Shaler, Karen (DEQ); Benzie, Richard (DEQ); Prysby, Mike (DEQ)
> **Subject:** RE: KWA and City of Flint
>
> Director Wyant, Deputy Director Sygo, and Liane,
>
> A response at this point may be moot as Flint and Genesee Co. already held a press conference yesterday rejecting the DWSD offer.
>
> It is also unclear whether DWSD provided its offer directly to Flint and Genesee Co. by the deadline in Treasurer Dillon's letter. However, Flint and Genesee Co. still took the offer under consideration.
>
> Our office concurs with both Flint and Genesee Co. that the offers provided by DWSD were incomplete.

Of the two scenarios provided by DWSD it appeared that only Scenario 2 was listed as potentially being more cost effective. However, this scenario did not address the following:

1. The DWSD scenarios are based on 40 MGD of service capacity. However, the KWA project is providing 60 MGD of initial capacity with potential expansion to 75 MGD in the future. Therefore, in order for a more direct comparison the DWSD scenario would need to increase capacity to 60 MGD, which would increase fixed rate commodity costs as well as the capital costs for the Huron Plant that DWSD was planning to allocate to Flint and Genesee Co., presumably by as much as 50%.

2. DWSD proposals cover a 30 year period to 2042, but fail to recognize that after this period bond payments for the KWA project will be complete and result in a significant reduction in costs for the KWA option.

3. While DWSD indicates that Flint and Genesee Co. would be given "broadened representation", it remains unclear exactly what this means in terms of actual control in the decision making process.

4. This scenario continues to rely on a single transmission system and would require the City of Flint to maintain its WTP for emergency purposes and these costs do not appear to be included. In addition, use of the Flint WTP as an emergency backup would leave Genesee Co. without an adequate backup supply to meet their 30 year needs.

Again, without DWSD providing the specific details of these proposals, it is difficult to provide a true comparative analysis, and as such Flint and Genesee Co. appear to be justified in their rejection of these proposals.

Please let me know if you require any further response.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Sygo, Jim (DEQ)
Sent: Tuesday, April 16, 2013 9:59 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Shekter Smith, Liane (DEQ); Shaler, Karen (DEQ); Thelen, Mary Beth (DEQ)
Subject: FW: KWA and City of Flint

Steve, Mike and Richard,

Please take a look at DWSD's last best offer to the City of Flint and provide your collective perspective to the Director through Liane by the end of the week. Copy me in as well. I'll be out of the office but would like to know if you think this is worth considering.

Thank you for your expedited review.

From: Wyant, Dan (DEQ)
Sent: Tuesday, April 16, 2013 6:52 AM
To: Sygo, Jim (DEQ)
Subject: FW: KWA and City of Flint

Jim,

Liane is out of the office today, Can you forward this directly to her staff that worked on this with us.

Dan Wyant, Director
Department of Environmental Quality
517-373-7917

From: Wyant, Dan (DEQ)
Sent: Tuesday, April 16, 2013 6:51 AM
To: Sygo, Jim (DEQ); Creal, William (DEQ); Shekter Smith, Liane (DEQ)
Cc: Anderson, Madhu (DEQ)
Subject: FW: KWA and City of Flint

Bill and Liane,

Can you have your staff's take a quick look at this and let me know today if they think this changes their thoughts and comments to me last week.

Dan Wyant, Director
Department of Environmental Quality
517-373-7917

From: Dillon, Andy (Treasury)
Sent: Monday, April 15, 2013 7:55 PM
To: Wyant, Dan (DEQ); Dennis Muchmore; Roberts, John (GOV)
Cc: Stibitz, Brom (Treasury); Saxton, Thomas (Treasury)
Subject: Fwd: KWA and City of Flint

FYI

Dan, any thoughts re the attached?

We gave dwsd until today to put best offer on table. Flint is to get back to us tmrw. I want to make sure their expected rejection is made in good faith.

Sent from my iPad

Begin forwarded message

> **From:** "Debra Ragland" <dragland@dwsd.org>
> **To:** "ekurtz@cityofflint.com" <ekurtz@cityofflint.com>
> **Cc:** "jwright@co.genesee.mi.us" <jwright@co.genesee.mi.us>, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>, "James Fausone" <fausone@dwsd.org>, "orrk@detroitmi.gov" <orrk@detroitmi.gov>, "Sue McCormick" <mccormick@dwsd.org>
> **Subject: KWA and City of Flint**

Please see attached on behalf of Sue F. McCormick.

Faxed copy forwarded to Mayor Dayne Walling and Jeff Wright.

From: Murray, David (GOV)
Sent: Sunday, February 01, 2015 5:15 PM
To: Agen, Jarrod (GOV); Snyder, Rick (GOV); Wurfel, Sara (GOV); Scott, Allison (GOV)
Subject: Background information and draft press releases for Tueday water event in Flint
Attachments: 2 FDCVT Grant Awards draft.docx; Briefing Flint grant announcement.docx; RELEASE Flint water grants.docx

Good afternoon Governor,

Here is background on the planned Tuesday event in Flint regarding the $2 million Distressed Cities grant and other issues connected to the water situation.

There are plans for two press releases on Tuesday. The first will detail the two Flint grants and will be released by the governor's communications office. The other release, which would detail the other grants, would follow from Treasury with a quote. Both drafts are attached, and we are considering approaching the Flint mayor or emergency manager to contribute a quote.

Mayor Walling has agreed to speak at the event, with Harvey Hollins and Dan Wyant representing the administration. Sen. Ananich has asked to speak, and it has been suggested that Rep. Neeley would speak and it might be better to add him to the program. Others, such as Deputy Director Workman and Emergency Manager Ambrose, would be present and available.

The attached document includes details about the planned event, as well as background on the grants from Treasury and on the entire water issue from DEQ as well as Mayor Walling's Facebook post and links to the stories in the media about the issue.

We have a room reserved and are working with the communications team in Flint to have microphones and other items needed for the event.

Please let me know if there is any information you think should also be included, or anything that should be changed.

Thank you very much,

Dave Murray

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

89 (Rev. 11-13)

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

February 3, 2015

FOR IMMEDIATE RELEASE
www.michigan.gov/treasury

Contact: Terry Stanton, Treasury
(517) 335-2167
Dave Murray, Governor
(517) 335-6397

draft

Gov. Rick Snyder announces grants helping distressed municipalities with water, public safety, appraisal issues

$8 million awarded for projects aimed at improving services, quality of life

LANSING, Mich. -- Gov. Rick Snyder today awarded $8 million to six municipalities to fund various improvement projects, including water system and street lighting enhancements and technology upgrades through the Financially Distressed Cities, Villages, and Townships Grant Program.

Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

"Municipalities receiving this special funding are some of the areas hardest hit by the Great Recession," Snyder said. "I am pleased we can offer funding assistance to help these local governments improve various public services their taxpayers and residents expect and deserve."

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

The following communities will receive funding this year, with projects and amounts noted (alphabetical order):

Local Unit	Project Description	Amount
City of Benton Harbor	Complete a property reappraisal to provide updated and accurate assessing records. Additionally, community enhancement through blight management and sidewalk replacement.	$475,000
City of Benton Harbor	Water system enhancement through water main replacements and fire hydrant repairs.	$434,960
City of Ecorse	Public safety enhancement through improved street lighting.	$350,000

City of Flint	Water system enhancement through improved waste management.	$1,100,000
City of Flint	Water system enhancement through leak detection and pipe assessments.	$900,000
City of Hamtramck	Complete a property reappraisal to provide updated and accurate assessing records.	$167,860
City of Hamtramck	Upgrade City Hall security.	$50,000
City of Hamtramck	Public safety enhancement through improved street lighting.	$404,600
City of Highland Park	Water system enhancement through meter replacement, leak detection, and system repairs.	$2,000,000
City of Inkster	Complete a property reappraisal to provide updated and accurate assessing records.	$73,460
City of Inkster	Water system enhancement through fire hydrant repairs.	$150,000
City of Inkster	Provide a backup power source for public safety.	$30,000
City of Inkster	Public safety enhancement through the creation of a multi-jurisdictional narcotic team.	$240,000
City of Inkster	Public safety enhancement through police officer training.	$41,970
City of Inkster	Public safety enhancement through the deployment of an additional police officer.	$320,000
City of Lincoln Park	Public safety enhancement through updated technology.	$143,490
City of Melvindale	Public safety enhancement through fleet replacement of police vehicles and updated technology.	$88,000
City of Pontiac	Community enhancement through blight management.	$125,000
City of River Rouge	Public safety enhancement through improved street lighting. Additionally, infrastructure replacements to City Hall.	$591,508
Royal Oak Township	Public safety enhancement through improved street lighting	$86,559
Royal Oak Township	Public safety enhancement of police services.	$217,593

Applications for the next round of Financially Distressed Cities, Villages, and Townships Grant Program will be available on the Department of Treasury website this spring. Applications must be submitted to Treasury by the close of business on XXX, XXX 31, 2015.

Preference is generally given to applicants from local units in which:

- A financial emergency has been declared in the past five years;
- An approved deficit elimination plan for the general fund is currently in place; or,
- Two or more conditions indicating "probable financial distress" currently exist.

For more information about FDCVT grants, including an application for cities, villages, and townships, visit www.michigan.gov/revenuesharing.

####

*Conditions of "probable financial distress" relating solely to school districts are not included as conditions for FDCVT, as school districts are not eligible.

Briefing: Grant announcement in Flint

Tuesday, Feb. 3, 2015, 3-4 p.m.
Haskell Community Center, 2201 Forest Hills Ave. Flint
Governor's communications: Dave Murray, murrayd1@michgian.gov, [redacted]
DEQ communications: Brad Wurfel, wurfelb@michigan.gov, [redacted]
Treasury communications: Terry Stanton, stantont@michigan.gov, [redacted]

Purpose

The state government is providing support for the Flint government as it addresses issues with its water system. The state on Tuesday is announcing that Flint is receiving two grants totaling $2 million related to water system improvements through the Financially Distressed Cities, Villages and Townships grant program. DEQ Director Dan Wyant will address ongoing efforts with his agency to test Flint water and explain why the city is facing some of its problems. Senate Minority Leader Jim Ananich, D-Flint, will discuss his appreciation for the ongoing support for the city and its residents.

Attending

- Harvey Hollins, director of the Michigan Office of Urban Initiatives
- Dan Wyant, director of the Michigan Department of Environmental Quality
- Wayne Workman, deputy treasurer, Michigan Department of Treasury
- Jerry Ambrose, Flint emergency manager
- Dayne Walling, Flint mayor
- State Sen. Jim Ananich
- State Rep. Sheldon Neeley
- State Rep. Phil Phelps

Agenda

3:00 PM – 3:05 PM:	Harvey Hollins announces that Flint has received two grants totaling $2 million.
3:05 PM – 3:10 PM:	Dan Wyant discusses the state's ongoing role in monitoring Flint's water and any assistance that has been provided and will continue to be provided.
3:10 PM – 3:15 PM:	Mayor Dayne Walling remarks about appreciation for state assistance.
3:15 PM – 3:20 PM:	Sen. Jim Ananich remarks about appreciation for state assistance.
3:20 PM – 3:25 PM:	Rep. Neeley remarks.
3:25 PM – 3:35 PM:	Harvey Hollins closing remarks, opens floor to media questions.
3:35 PM	Event ends, though this might be optimistic.

Background

- The quality of Flint water has been a high-profile concern in recent weeks, with residents complaining about the color, taste and smell of tap water since a switch to Flint River water as a temporary source as a pipeline is built to Lake Huron as a water source starting in 2016.
    - Residents have attended meetings with jugs of brownish water.
    - U.S. Kildee has worked with labor and community groups to distribute bottled water.
- Mayor Walling has issued a letter (included below) calling for state and federal assistance for the city, including forgiveness of some $20 million in debt through the Drinking Water Revolving Loan Fund and calling for the governor to come to Flint personally.
    - Walling also submitted a guest column to the Flint Journal with similar requests.

        - He said the loan forgiveness is needed for the city to upgrade its water treatment process.
    - Governor and Mayor Walling had a telephone conversation on Friday, and the mayor has pledged to work together on solutions.

- Rep. Sheldon Neeley also has sent the governor a letter, saying that his constituents "are on the verge of civil unrest."

- The Department of Environmental Quality has been monitoring the water situation, with a detailed backgrounder and talking points attached below.

- The Treasury Department is announcing Tuesday that Flint is among the cities receiving a combined $8 million the Financially Distressed Cities, Villages and Townships grant program.
    - The announcement of the other grants will follow the Flint announcement.
        - The Flint grants are $1.1 million to allow the city to replace the functions of the old incinerator with new water pollution control facility allowing for the disposal of waste to landfills.
        - The other is $900,000 to allow the city to hire a contractor to perform a leak detection survey, which will lead to prioritizing repairs.
    - A breakdown of the grants is included below.

Treasury breakdown of Flint grants

Flint Incinerator: The grant project entails shutting down the current Water Pollution Control Facility Incinerator (due to the incinerator not being up to new EPA standards). In order to meet EPA standards, it would cost roughly $8.8M in upgrades to the current incinerator. The grant funding will allow them to replace the functions of the old incinerator by constructing new facilities which will allow for the disposal of waste to landfills.

Budget Breakdown	
Construction Contractor	$1,050,000
Project Management	$50,000
Total	$1,100,000

Flint Leak Detection: The grant project will allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity. This data will allow the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

Budget Breakdown	
Project Planning	$90,000
Mobilization of Crew to Site	$27,000
Leak Detection < 16" diameter	$378,000
Leak Detection 16" diameter or >	$270,000
Pipe Condition Assessments	$135,000
Total	$900,000

DEQ backgrounder on Flint water

Following the formal approval of Flint into the KWA in 2012, DWSD sent Flint a letter saying their contract was thereby terminated (by early 2013).

Genesee County has been using DWSD water without a contract since May 2014. But Flint took the letter to imply a water cutoff, and promptly turned to DEQ with a proposal to use the Flint River (their historic backup system).

This proposed shift was pitched primarily as a money saver. But it put the city in the business of water production, where they historically had been in the business of water transmission. DEQ approved the use of the river as a source, based on the treatment plant's past performance as a standby facility and the improvements we outlined prior to a switchover.

Several municipalities around the state use surface water supplies (rivers): Blissfield near Monroe, Manistique, and Alma to name a few.

The city completed the upgrades at the water plant the facility and DEQ approved it April 2014.

There were some initial hiccups. Last summer, there were a couple of 'boil water' notices issued. One for a water test that showed e. coli, one for a break in the water main.

The challenge to using the Flint River as a source is that the condition of the water is variable and changes with season and weather. It has substantially more organic matter than deep lake sources like Lake Huron. This organic matter is mobilized by high water events, and warm weather also can account for more organic material in the water.

The treatment of the organic matter is done with chlorine. One might conclude that the continual answer is just to use more chlorine to achieve water safety. However, at some point on the continuum, the chlorine and organic matter create TTHM – total trihalomethanes – as a byproduct. When the standard for those is exceeded over several consecutive quarters of testing, the supply is required by law to issue public notice and submit an approved plan for addressing the situation.

You'll note that this regulatory approach means TTHM testing is done quarterly. That means people who use the system are exposed to TTHM for several months before the public notice is required. It's because TTHM is a chronic health threat. Over the long term (measured in decades), continued exposure can contribute to some known health problems. If this were an immediate health threat, customers would receive immediate notification to boil their water or not use it.

Put in context, the EPA (which established the standard and the rule) estimates the existence of the TTHM standard prevents an estimated 280 bladder cancer cases each year … out of more than 330 million people who use public water supplies around the country.

It's not "nothing." State and federal law requires quarterly testing for TTHM and that the public be informed of it when the annual average of four quarters' worth of consecutive testing shows TTHM levels exceeding 80 parts per billion. Flint's results managed to exceed the annual average in three quarters, and they must develop a plan to address it.

But it's not like an eminent threat to public health. Unlike an e. Coli or even total coliform bacteria maximum contaminant level, which require immediate public notification and response and are part of daily / hourly testing of public water supplies, TTHMs pose a public health concern with chronic, long-term exposure.

It's clear the nature of the threat was communicated poorly. It's also clear that folks in Flint are concerned about other aspects of their water – taste, smell and color being among the top complaints.

The Safe Drinking Water Act requires public water supplies be tested for more than 90 regulated contaminants, including microbial contaminants. The act, and the program here in Michigan, work to ensure that water is safe to drink. The act does not regulate aesthetic values of water. Here are some factors affecting the aesthetics of water in Flint.

1. It's the Flint River. The water supplied by DWSD historically came from Lake Huron. It's softer. With hard water, you get a different flavor and feel. It's why General Motors suspended use of Flint Water – it was rusting their parts. Also, there's the 'organics' factor (discussed previously).
2. The system is old. Flint has more than 500 miles of water pipes. More than half of those pipe miles are more than 75 years old. Much of it is cast iron. Hard water can react with cast iron and exacerbates the rusty factor, which creates that brown water that angry residents were holding up in jugs for the media cameras last week. Valve failure has also been a key challenge. The system has an estimated 7,500+ valves. When they stick open or stick shut, it affects the hydraulics of the system and increase areas of stagnation. The city has a backlog of valves that need to be addressed. They've done half a dozen or so since November.
3. Flint is old. Many of the homes served by the system are old. Brown water complaints may also be attributable to cast iron pipes in customers' service connection to the city lines. The DEQ has been encouraging people with water coloration concerns to contact the city and see whether it is the service line or the City's line causing the issue. Again, discoloration is not an indicator of water quality or water safety, but we recognize that nobody likes it.

In summary, the City of Flint has tremendous need to address its water delivery system. We are not aware that they have any capital improvement funds for preventative maintenance in place, much less line replacement project monies that will require hundreds of millions.

The City was approved for a Revolving Fund loan in 2008 or 2009. As a Distressed Community, they qualified for flexible terms and 2 percent interest rate Revolving Fund Loan. After they were notified they were approved for the loan, they declined it. Previous SRF loans from the state to Flint bear an outstanding balance of $20.7 million today.

The DEQ continues working with the city to address the TTHM issue. They can take interim steps – from scrubbing the insides of transmission lines to carefully monitoring the hydraulic challenges in their system – to address customers' aesthetic concerns. Their TTHM numbers already are showing dramatic improvement; the November testing showed only one of seven sample points exceeding the standard.

The key now is that the standard is an average of three quarters' worth of results. It will be some time before they are officially "not in violation." However, depending on weather in 2015, it's not unforeseeable that we will be having this conversation again by next Christmas.

The key to the conversation is that TTHM is not a top health concern. That's key because residents need to understand TTHM in context, and it is key because it appears the mayor has seized on the public panic (sparked, frankly, by their poor communication of the violation notice) to ask the state for loan forgiveness and more money for their infrastructure improvement.

Another key thing to remember is that once the city connects to the new KWA system in 2016, this issue will fade in the rearview.

Key messages:

1. The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
2. Municipal water supplies are tested rigorously and regularly for more than 90 regulated contaminants, including microbial contaminants that pose an immediate public health concern.

3. Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.
4. TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of several decades of exposure. The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.
5. The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.
6. The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.
7. Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ.

Mayor Walling's Facebook post

Friend,

Access to clean, safe, affordable water is a basic human right.

That's why I just sent Gov. Snyder my Flint Water Improvement Plan. It focuses on the areas of safety, quality, access, investment and education. My letter urges the governor to quickly implement these ideas so that Flint's water is 100% safe.

Please contact Gov. Snyder by calling [redacted] (or by clicking here) and ask him to take action immediately to implement my plan and ensure Flint's water is safe.

My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the state and federal levels. Here is my plan:

Safety & Quality

- 100% Safety is the standard
- City of Flint releases testing data to assure safety and expands testing to households with support from the Michigan Department of Environmental Quality
- Support alternatives for those advised not to drink the water by their doctors through the Michigan Health Endowment Fund and community partners to protect the vulnerable like seniors and infants
- Bring on experienced river water treatment operational management in the City of Flint
- Require water testing data to be released quarterly by law in all Michigan communities

Access

- Announce an amnesty program for turn-ons and reduce the turn-on cost in Flint
- Develop a revised payment plan policy to allow customers to come back on to the Flint system
- New Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for customers (modeled on Federal and State energy utility programs: Low Income Home Energy Assistance Program; Michigan Energy Assistance Program; State Emergency Relief)

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State Investments
- State approves City of Flint's Distressed Cities Fund applications
- Federal and State forgiveness of payment to Drinking Water Revolving Loan Fund

- Federal and State financing for future improvements
- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

- Develop a community partnership to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information on water assistance
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

The struggle with our water has gone on for too long. The state must take action and do its part. Please ask Gov. Snyder to take action immediately to implement my plan and ensure Flint's water is safe. Thank you for your ongoing support.

Links to coverage

- Mayor, governor have 'long, productive' talk about Flint's water problems, Jan. 30
- 2,000 more gallons of water headed to Flint for giveaway, Jan. 30, 2015
- Flint emergency manager says there are two big reasons not to reconnect Detroit water, Jan. 29
- Flint Democracy Defense League plans four meetings on city's water problems, Jan. 29
- Environmentalist sends out new warnings about Flint water, NBC, Jan. 27
- Erin Brockovich says on Facebook she's prepared to come to Flint, MLive, Jan. 27
- Mott Community College not waiting for Flint to ensure safe water, MLive, Jan. 26
- Detroit water chief says she's willing to sell emergency water to Flint -- no strings attached, Jan. 26
- Mayor says governor needs to visit Flint to see water crisis first hand, MLive, Jan. 26
- Need water? Flint groups collect 600 cases, plan distribution this week, MLive, Jan. 26
- Incoming Flint water expert would have 'continual oversight' until new pipeline connected, Jan. 25
- Looking back at Flint's water problems (photo gallery), MLive, Jan. 25
- Flint water problems: Switch aimed to save $5 million -- but at what cost?, MLive, Jan. 23
- State says its already 'working diligently' on Flint's water problems, MLive, Jan. 22
- Officials say Flint water is getting better, but many residents unsatisfied, MLive, Jan. 21

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray, Governor's Office 517-335-6397 Terry Stanton, Department of Treasury 517-335-2167	<< AUTODATE >>

Gov. Rick Snyder awards Flint $2 million in Distressed Cities grants for water system infrastructure improvements

Funding to be used for leak detection, waste incinerator replacement

LANSING, Mich. – Gov. Rick Snyder today awarded Flint $2 million in grants for water system infrastructure improvements, part of an overall $8 million plan to help cities through the Financially Distressed Cities, Villages, and Townships Grant Program.

Flint is among six municipalities receiving grants through the program. The city will use the funding to detect leaks in its water lines and replace its Water Pollution Control Facility Incinerator.

"There are opportunities for the state government to assist Flint city leaders as they address issues related to the city's water system," Snyder said. "These grants will help recovering cities improve public services and infrastructure, improving the quality of life for all residents."

The grants to Flint were announced today at the Haskell Community Center by Harvey Hollins, director of the state's Office of Urban Initiatives and Wayne Workman, the state's deputy treasurer. They were joined by Dan Wyant, director of the Michigan Department of Environmental Quality, Flint Emergency Manager Jerry Ambrose, Mayor Dayne Walling, state Senate Minority Leader Jim Ananich, state Reps. Sheldon Neeley and Phil Phelps.

Flint was awarded $900,000 to allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity, allowing the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

The city also was awarded $1.1 million to shut down its current Water Pollution Control Facility incinerator and replace it with new facilities which will allow for the disposal of waste in landfills. The existing facilities are not up to federal Environmental Protection Agency standards.

Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of “probable financial stress,” as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

##

From: Muchmore, Dennis (GOV)
Sent: Friday, September 25, 2015 10:29 AM
To: Snyder, Rick (GOV); Calley, Brian (GOV)
Cc: Scott, Allison (GOV); Agen, Jarrod (GOV)
Subject: Flint water

The issue of Flint water and its quality continues to be a challenging topic. The switch over to use Flint river water has spurred most of the controversy and contention. The DEQ and DCH feel that some in Flint are taking the very sensitive issue of children's exposure to lead and trying to turn it into a political football claiming the departments are underestimating the impacts on the populations and particularly trying to shift responsibility to the state.

We have put an incredible amount of time and effort into this issue because of the impacted neighbors and their children, and the KWA/DWSD controversy and Dillon's involvement in the final decision. Kildee is asking for a call with you. That's tricky because he's sure to use it publicly, but if you don't talk with him it will just fan the narrative that the state is ducking responsibility. I can't figure out why the state is responsible except that Dillon did make the ultimate decision so we're not able to avoid the subject.

The real responsibility rests with the County, city and KWA, but since the issue here is the health of citizens and their children we're taking a pro-active approach putting DHHS out there as an educator.

I'm not sure how much background you need on all this so I don't want to flood you with stuff. Jarrod and Dave have a lot of info that we can supplement your understanding and we can put a briefing or face to face with Wyant and Lyon if you want to go there.

Sent from my iPhone

From: Muchmore, Dennis (GOV)
Sent: Monday, September 28, 2015 12:04 PM
To: Snyder, Rick (GOV)
Subject: FW: Letter to Governor Snyder: Flint Water
Attachments: 09.28.2015-Letter-Ananich-Snyder-Water-Requests.pdf

Just got this.

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Monday, September 28, 2015 11:45 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Letter to Governor Snyder: Flint Water

Hi Dennis,

Senator Ananich began drafting the attached letter on Sunday and thought it would be helpful to guide our 12pm call.

Thanks,

Andy

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

September 28, 2015

State of Michigan
Executive Office of the Governor
P.O. Box 30013
Lansing, MI 48909

Governor Snyder,

Access to safe, affordable drinking water is a basic necessity for every community. It is completely unacceptable that respected scientific experts and our trusted local physicians have verified that the City of Flint's drinking water is dangerous for our citizens, especially our most vulnerable young people.

As a result, I am formally requesting assistance as suggested by the experts on the frontline of this public health crisis. Here are the top priorities we should work together to address:

1. **Swift transfer to a safe source of water until the Karegnondi Water Authority (KWA) project is complete next year.** Your administration has the ability to ensure a financially acceptable and responsible contract between Flint and the Detroit Water and Sewerage Department, particularly in light of the public health implications with the Flint River supply.

2. **Equally urgent is the need for corrosion control as recommended by independent scientific experts.** There are chemical treatment additives that could help reduce this corrosion. I urge you to help the city implement anti-corrosion methods immediately. The current emergency makes the January timeline unacceptable.

3. **Filters and bottled water assistance.** Flint water touches the entire city. Whether it's a person's home, work, school, restaurant or place of worship, access to safe, clean drinking water should not be hindered. Water filters, used in conjunction with corrosion control methods, are necessary to help guard against toxic exposure.

   I have been working with the philanthropic community and private sector to secure donations to acquire filters and water; however, more funds will be necessary to effectively cover the thousands of residents impacted. I would like to formally request emergency funding to help supplement the acquisition of water filters and bottled water. Any and all appropriate state or federal money to help accomplish this feat should be considered.

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

4. **Support for completion of the KWA pipeline.** It is presumed that the upcoming KWA pipeline will solve a number of problems associated with the current sourcing of Flint's water from the Flint River. I am requesting a meeting between representatives from your office, KWA board members and project engineers to discuss any options to expedite the pipeline's construction.

5. **A long-term commitment to addressing outdated infrastructure.** A recent EPA report just outlined the billions of dollars necessary over the next several decades to adequately secure safe water for our entire state. You have the position and opportunity to be a national leader on moving the debate forward on this topic so that we can avoid the type of catastrophe my community is grappling with today.

I look forward to working with you to deliver on these concrete and urgent action items to alleviate the public health crisis facing our residents.

We jeopardize any progress and comeback for our cities and state if we cannot ensure safe, basic necessities for our families or if we cannot come together swiftly to fix an identified, severe threat to the safety of our people.

Sincerely,

Jim Ananich
Senate Democratic Leader
District 27

cc:
U.S. Representative Dan Kildee
Mayor Dayne Walling, City of Flint
Howard Croft, City of Flint
Susan Hedman, EPA
Thomas Poy, EPA
Michael Schock, EPA-ORD
Darren Lytle, EPA-ORD
Denise Fortin, EPA
Liane Shekter-Smith, MDEQ
Pat Cook, MDEQ
Stephen Busch, MDEQ
Brad Wurfel, MDEQ
Marc Edwards, Virginia Tech

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 3:51 PM
To: Snyder, Rick (GOV)
Cc: Calley, Brian (GOV); Agen, Jarrod (GOV); Clement, Elizabeth (GOV)
Subject: FW: flint documents
Attachments: Flint public works.pdf; Flint water quality.pdf

FYI. For your background.

From: Workman, Wayne (TREASURY)
Sent: Tuesday, October 13, 2015 10:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Subject: FW: flint documents

Here is the Interim report from February also

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Dempkowski, Angela (Treasury)
Sent: Tuesday, October 13, 2015 9:49 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: flint documents

Randy asked me to get these to you to give to Dennis Muchmore.

Angela Dempkowski
Senior Executive Management Assistant
Department of Treasury

From: Ducat, Penny (Treasury)
Sent: Tuesday, October 13, 2015 9:43 AM
To: Dempkowski, Angela (Treasury) <DempkowskiA@michigan.gov>
Subject: scan

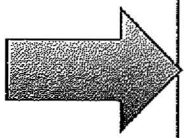
Penny L Ducat
Bureau of Local Government
430 W. Allegan
Lansing, MI 48922
Email: ducatp@michigan.gov
517 33-50443

VEOLIA
City of Flint, MI
City Council Public Works Committee
Interim Water Quality Report

Veolia Scope of Work

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report



Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Items of Note

- **Not in scope** – studying why the change from DWSD or the history of the utility
- **What we found** – A very frustrated community and a staff trying to solve the problem, having some success but frustrated with the pace of change

Everybody Is Checking the Safety of Water

- City, state, news media, universities and other groups
- Safe = compliance with state and federal standards and required testing
  - *Latest tests show water is in compliance with drinking water standards*
  - *Monthly report available on web page*
- More than 20,000 tests required annually for city
- Strict testing requirements in place (what and how to test)

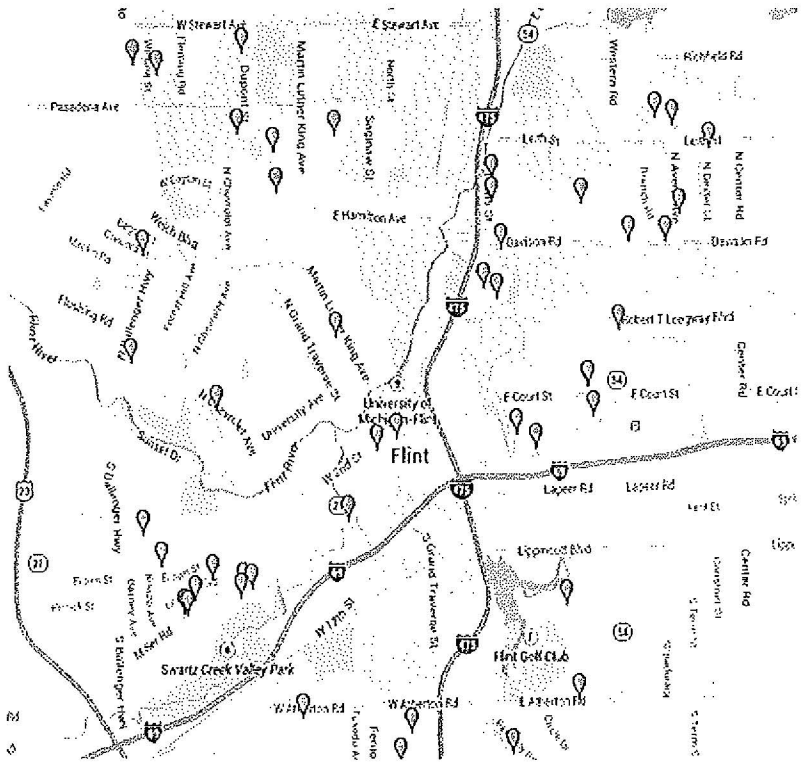
Why TTHM Notices?

- TTHM is formed as a result of the reaction between chlorine and organic material in the water
- City is required to test quarterly at 8 sites
  - *Last summer, several sites had more TTHM than allowed*
- City has reduced levels of TTHM and now all sites are in compliance
  - *Customer notification letters are required until tests are in compliance an average of four quarters*
- It will take at least 2 more quarters to lower average
  - *Even a change to DWSD water doesn't solve problem*
- Flint is not alone – hundreds of communities are facing TTHM issues

Why Discolored Water?

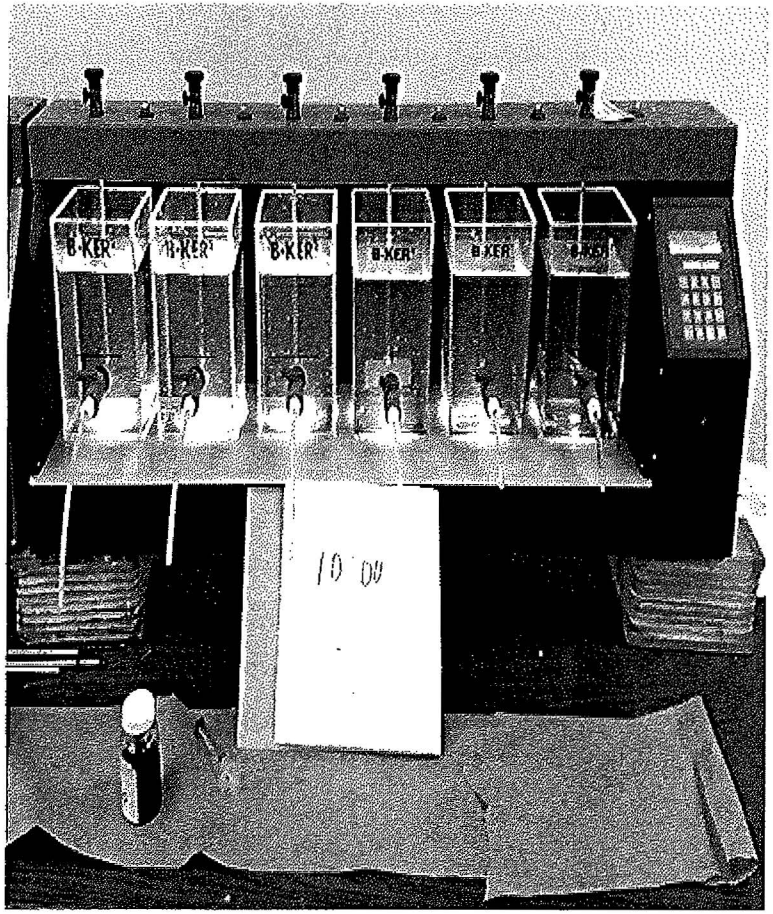
- Old cast iron pipes
- Always has been some discolored water problems – mostly after water breaks
- Efforts to reducing TTHM didn't help discoloration
  - *Doesn't mean the water is unsafe but it is not appealing and raises questions*
- City will test the water at your home – call 787-6537 or email flintwater@cityofflint.com
- Tracking customer complaints is important

Location of water quality complaints
The last 12 months – fewer than you think



Water Quality Can Be Improved

- Adjust the chemicals being fed – stop some, increase some and change some
- Provide better monitoring of water quality to help make adjustments
- Continue repair or replacement of broken parts
- Reduce the over capacity of the distribution system
- Do a better job explaining what is happening
- Do a better job of asking for help



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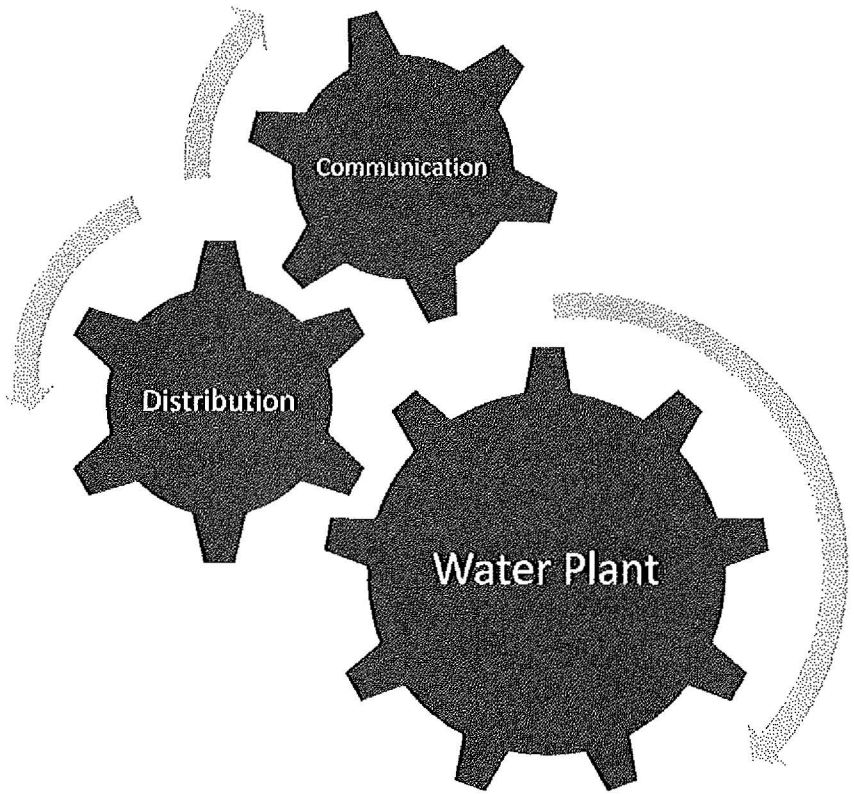
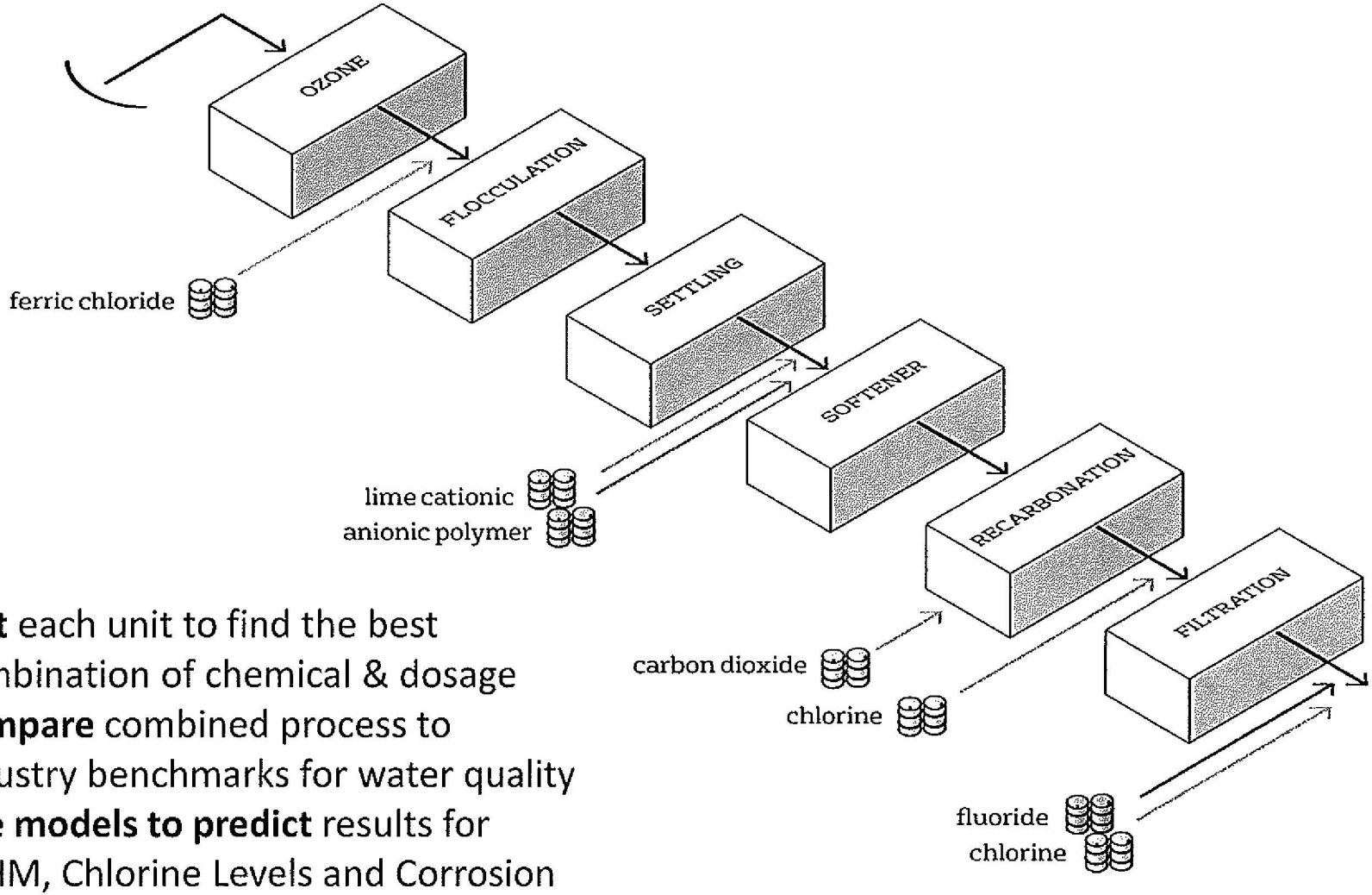
Further Explanation of Solutions

Solution Involves Coordination of 3 Activities



- Water plant improvements
  - *Optimize chemical dosages*
  - *Consider different chemicals*
  - *Change dosing points*
  - *Install granulated activated carbon*
  - *Complete plant upgrades*
  - *Implement best mgt practices*
- Distribution system improvements
  - *Fix broken valves*
  - *Ask for customer feedback*
  - *Reduce tank storage*
  - *Target line flushing*
  - *Run a hydraulic model*
- Better communication with customers
  - *Engage advisory committees*
  - *More accessible utility*
  - *Make it easy to access information*
  - *Better customer communication*

Optimize Plant Processes



- **Test** each unit to find the best combination of chemical & dosage
- **Compare** combined process to industry benchmarks for water quality
- **Use models to predict** results for TTHM, Chlorine Levels and Corrosion

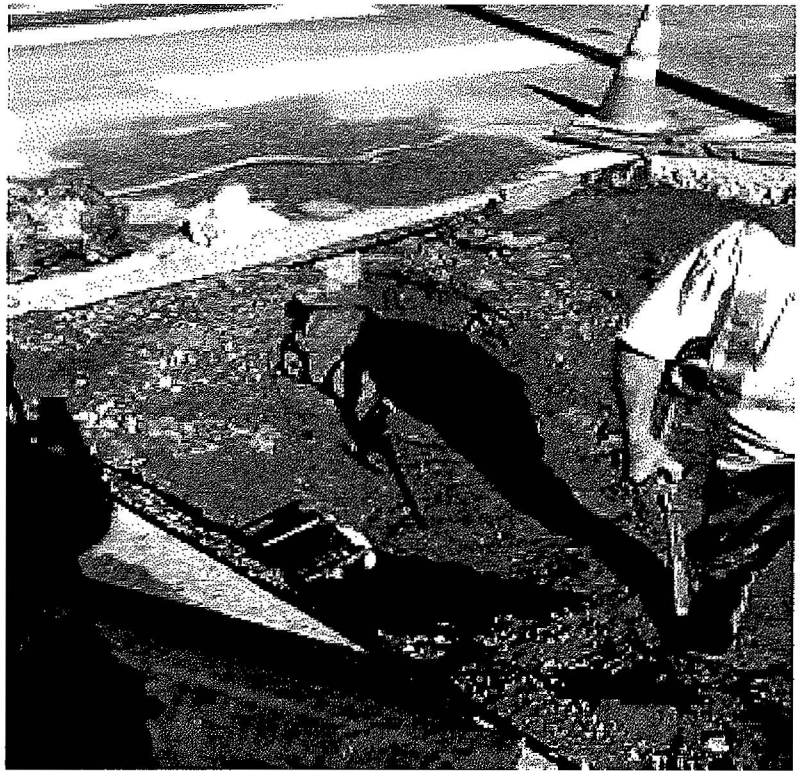
Complete Plant Construction & Re Prioritize Capital

Cost effective plan in budget

- Complete water plant renovation
  - *Target SCADA and instrumentation in plant*
- Speed up valve turning contract & provide money for replacements
- Speed up hydraulic model update to reduce tank volume
- Evaluate installing of granulated activated carbon on filters

Weather can impact timing

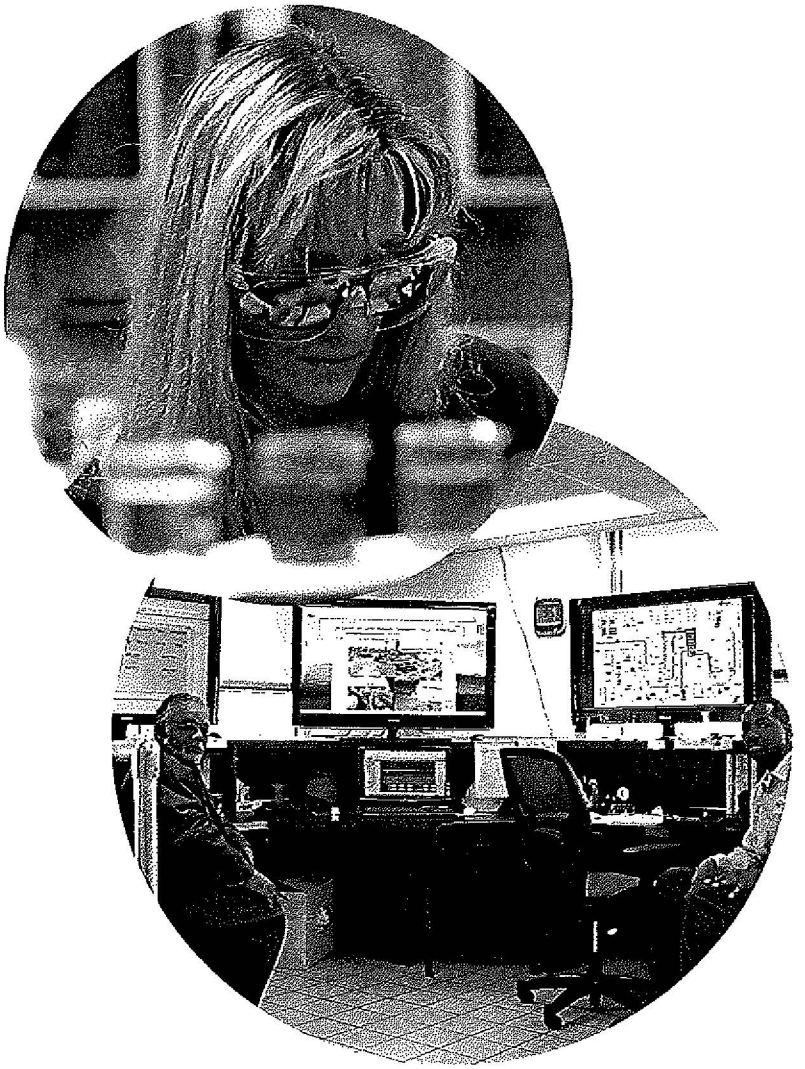
Digging up a water valve for repair
Need good weather to start



Implement Best Management Practices

<u>Activities to Help Operators Maintain Good Water Quality</u>

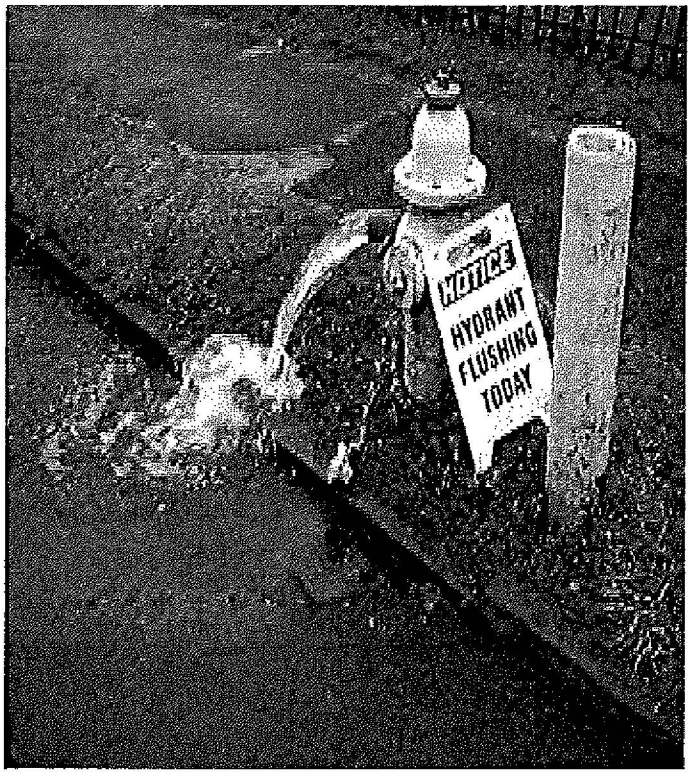
- Process Control Management Plan
- Lab QA/QC Program
- Computerized Maintenance Management System
- Asset Management System
- Training and Certification Program
- Vulnerability Plan



Distribution System Improvements

- Speed up flow of water from plant to homes – 2 weeks plant to house
  - *Find closed valves & open them*
  - *Replace broken valves*
  - *Update hydraulic model*
  - *Reduce system storage*
- Track customer complaints
  - *Test customer water*
  - *Spot flush hydrants to clean areas of stagnant water in the system*

Flushing out discolored water



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Improving Customer Service

Make It Easy to Access Information and People

Develop a proactive customer communication plan

- Create advisory committees to help direct efforts and improve flow of information
- Establish a single point of contact to manage all water quality complaints
- Provide additional customer service training to staff
- Expand neighborhood and community outreach
- Change monthly billing statements from card to envelope with information

Example - Communicate in the field

NOTICE: ANNUAL FLUSHING PROGRAM

We are conducting our annual flushing program to enhance your water quality and clean the distribution system.

DC Water crews will be flushing hydrants in your area 10:00 p.m. to 6:30 a.m. on the following dates:

9/24 through 9/30

IMPORTANT INFORMATION

- Your water supply will not be shut off during hydrant flushing.
- You may notice slight water discoloration or low water pressure.
- During this time, customers can continue normal water usage, including drinking, bathing and laundry (unless water is discolored).

If you experience discolored water during this period:

- Run your cold water taps for 15 minutes. If it does not clear up, please contact our Drinking Water Division.
- Do not run your hot water. If you experience discolored water from your hot water tap for several hours, then it is recommended to drain and flush your water heater tank.

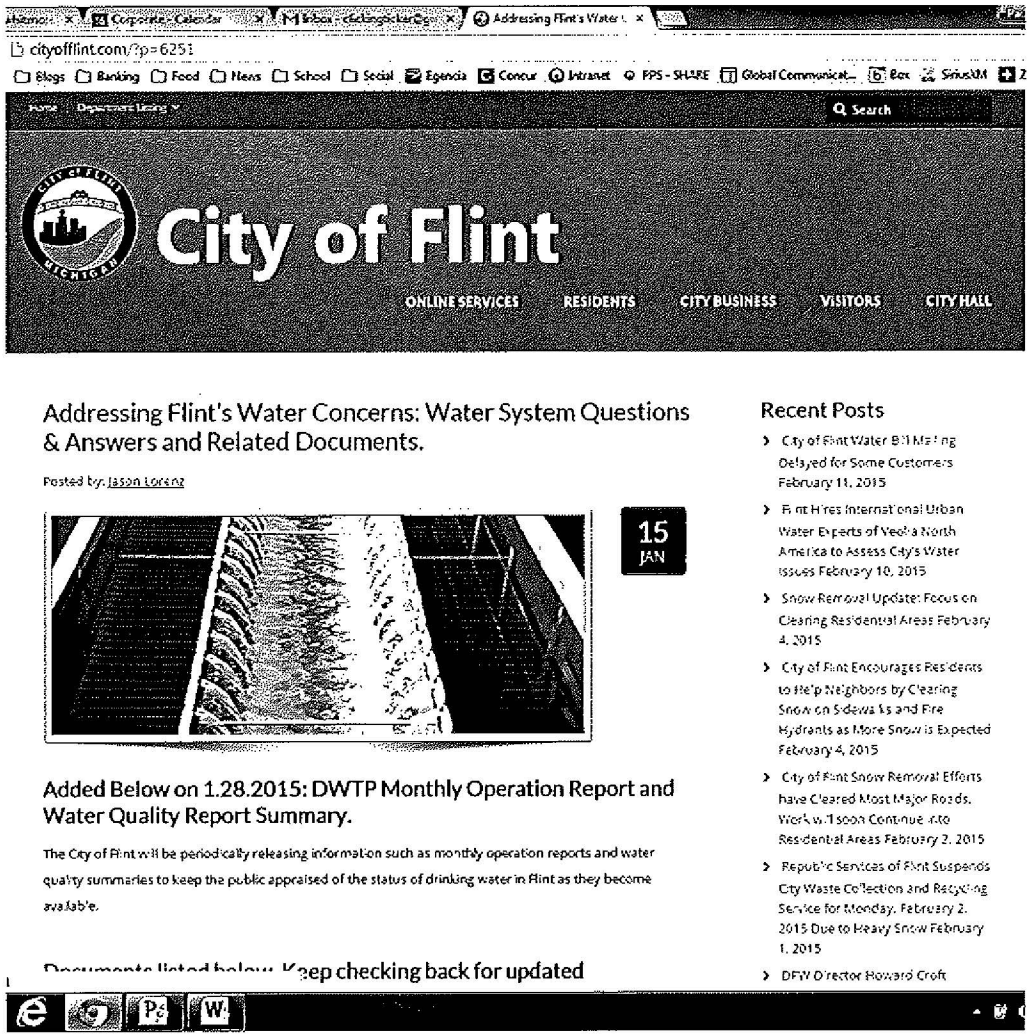
Provide field crews with additional communications tools to use to address questions or concerns from the public

Create door hangers, flyers, or yard signs to notify neighborhoods about main breaks, hydrant flushing, or system maintenance that may affect the public

Create a business card or other contact card with the name and phone number of the single point of contact with the Department of Public Works who is managing information flow

****sample door hanger provided by DC Water & Sewer Authority***

Clear, concise information is key



- **Simplify the reports on the web page dedicated to addressing water system questions**
  - ***Create a single-page, easy to understand report for the public***
  - ***Use charts or provide other examples to demonstrate water quality testing and system or treatment plant improvements underway***
  - ***Provide name, phone number and email address for identified point of contact so customers can request more information***
  - ***Continue to provide Monthly Operation Report and Water Quality Report Summary for those customers interested in more technical information***
  - ***Use site to provide additional notice of field work that may impact customers***

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What Is Next

Next Steps

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report

Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Questions Being Heard

REMEMBER

We just started. Might not have an answer yet to your question

- **When will water improve -** The water has improved with current actions. More changes will occur over weeks and months because of safety reviews
- **Date of next update and final report** – An update will be provided next week and a report the following week.
- **Time frame for implementing recommendations –** The City is already started. Others a few days and some weeks or months due to State approval being required or weather.
- **Cost of changes** – Don't know yet but we are aware of the financial concerns

More Questions Being Heard

- **How are TTHM formed –** It's the reaction of chlorine to organics (leafs, dirt) in the water.
- **How to reduce TTHM –** Reduce organics before introducing chlorine and shorten time chlorine has to react with the organics
- **What causes discoloration –** Older lines, the iron parts of the system will leach iron into the water causing the discoloration. Other times its just air built up.
- **Why no discoloration with DWSD –** There was. Flint had a bad time with breaks of old line and is doing lots of construction. This stirred up the water and caused discoloration.

More Questions Being Heard

- **Can you test my water –** The city will test your water for free. But, only 2 of 20 people have taken the city up on the offer since it began offering the service.
- **Medical problems –** Some people may be sensitive to any water. Talk to your doctor. The City is communicating with the medical community.
- **Confidence that future problems will be avoided** – Recommendations will include putting programs in place to better respond to water changes and assure quality

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Questions?

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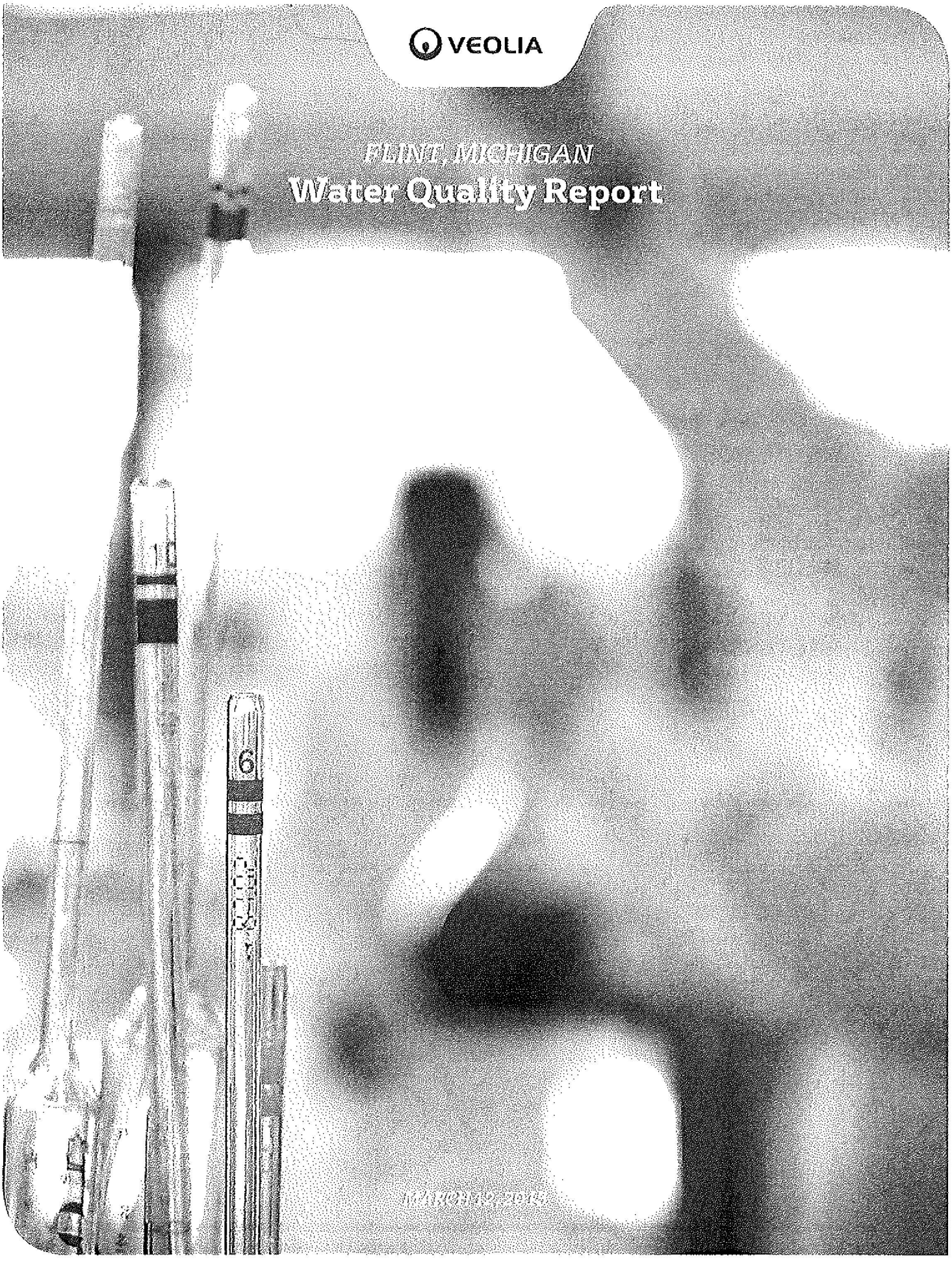
FLINT, MICHIGAN

Water Quality Report



MARCH 31, 2015

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VEOLIA

Water Quality Report
March 12, 2015

FROM
Veolia North America

TO
Emergency Manager Gerald Ambrose

Executive Summary

The City of Flint changed water sources, transitioning from Detroit's system to the Flint River. This change created water treatment challenges that have resulted in water quality violations. Aging cast-iron pipe has compounded the situation, leading to aesthetic issues including taste, odor and discoloration. Public interest and scrutiny of the drinking water system intensified following the distribution of required public notices of violation.

The City of Flint has made a number of good decisions regarding treatment changes that have improved water quality. However, this is a very complex water quality issue and the City is seeking additional advice on what to do to ensure healthful drinking water for the community.

Veolia appreciates the City's decision to seek independent third parties to review current treatment processes, maintenance procedures and actions taken to date, and provide ideas for improvement. We are pleased to present this final report to the City of Flint following our experts' 160-hour assessment of the water treatment plant, distribution system, customer service and communications programs, and capital plans and annual budget.

This report provides recommendations and a roadmap for improvement, though our engagement was limited in scope. Our assessment included reviewing actions taken by the City to date, validating the City's plans going forward, and making recommendations for ideas not being considered.

Although a review of water quality records for the time period under our study indicates compliance with State and Federal water quality regulations, Veolia, as an operator and manager of comparable utilities, recommends a variety of actions to address improvements in water quality and related aesthetics including: operational changes and improvements; changes in water treatment processes, procedures and chemical dosing; adjustments in how current technologies are being used; increased maintenance and capital program activities; increased training; and, an enhanced customer communications program.

We are also providing a recommended schedule and estimated costs for implementing changes. It is our desire to help Flint residents and public officials better understand the current situation so that informed decisions can be made to ensure safe drinking water for the city's customers.

Review of Actions Taken to Date

To address water quality issues, the city has made operational changes, sought help from the State, hired engineering firm Lockwood, Andrews & Newnam, Inc. (LAN) to provide additional advice, and hired Veolia for an assessment from a utility operator's perspective. The City has also reached out to different specialty vendors (chemical suppliers, filter companies and tank aeration companies) for information about products to help with the TTHM issues. These are logical steps to take.

Flint is not alone in dealing with TTHM problems, as many utilities across the country are facing this challenge. The City appears to be following standard steps that many of those communities are taking to successfully correct the problem.

Although the primary focus of this review was based on solving the TTHM problem, the public has also expressed its frustration over discolored and hard water. Those aesthetic issues have understandably increased the level of concern about the safety of the water.

The review of the water quality records during the time of Veolia's study shows the water to be in compliance with State and Federal regulations, and, based on those standards, the water is considered to meet drinking water requirements.

The City has been proactive in its efforts to reach out to the medical community, to set up a phone number and email address to receive complaints, to post State Water Quality reports, to provide the list of EPA required water tests, and offer to test the water at customers' homes.

From our review, these numerous efforts demonstrate how the city is trying to be transparent and responsive beyond what many other communities might do in similar circumstances.

State Report

The Michigan Department of Environmental Quality (MDEQ) has requested specific actions be taken related to the total trihalomethane (TTHM) issues. The February 2015 report from LAN (*Operational Evaluation Report TTHM Formation Concern*) indicated apparent reasons for the elevated levels of TTHM in the distribution system. These generally relate to high Total Organic Carbon (TOC) in the water source, improperly operating equipment both in the plant and the distribution system, less-than-optimal plant TOC removal and old cast-iron pipe in the distribution system. **Our assessment confirms that these reasons are likely given our on-site laboratory testing and analysis, as well as our first-hand observations.**

Due to time constraints, LAN's report to the State was submitted prior to Veolia's final analysis and recommendations, and contained a number of key initial and contingent steps the City should consider, including:

Initial Actions

- Hire a Third Party Water Quality Expert to Complete Independent Audit
- Obtain a THM Analyzer
- Carry Out Jar Testing
- Water Plant Optimization Softening
- Water Plant Optimization Disinfection of Filter Beds (Pre-Chlorination)
- Water Plant Optimization Polymer Aid to Coagulation and Flocculation
- Increase Water Main Flushing
- Water Modeling Cedar Street Pump Recirculation
- Water Modeling West Side Pump Recirculation
- Broken Valve Locations
- Increase Flushing

Contingent Actions

- Fix Ozone System
- Start Feeding Coagulant and Flocculation Polymer
- Convert to Lime and Soda Ash Softening
- Change Disinfection to Chloramine or Chlorine Dioxide Temporarily
- Install Pre-Oxidant at Intake
- Replace Filter Media Implement Advanced Treatment
- Increase Main Flushing
- Continue Valve Replacement
- Emphasize Cast Iron Pipe Replacement

Veolia's Recommendations

While many of Veolia's recommendations match the initial assessment provided by LAN, our approach, as an operator and manager of comparable utilities, considers a more comprehensive solution. These improvements include operational changes, differences in water treatment regimes and chemical dosing, increased maintenance, and increased training.

- **Addition of Permanganate –** The addition of a permanganate chemical will help reduce ozone demand as well as chlorine demand. The reduction of ozone is needed to help eliminate the possibility of violating the bromate limit. The addition of the chemical will require state approval, submission of design documents for approval, procurement of the equipment and installation. The State has indicated they will work with the City on expediting review and approval of any requested changes. The required dosage of permanganate is estimated to range from 0.5 mg/L to 1.2 mg/L with a corresponding price of $160,000 to $320,000 per year. (Please note – The water in the river is dynamic which means it will change with weather, seasons and other factors. The estimates provided are based on bench testing at a given time and as such require the operators to test water and to verify chemical dosages on a frequent basis.)
- **Reduction of Ozone Feed** – Treating water is a delicate balance - increasing ozone to fix the TTHM problem can raise bromate levels to a point of violation. The introduction of permanganate is being recommended to reduce the demand for ozone so that feed rates will not exceed 5 mg/L. The current ozone dosing has been as high as 8 mg/L and, as such, if allowed to continue, will increase the risk of violating the bromate levels.
- **Increase of Ferric Chloride** – Four coagulants were tested by Veolia -ferric chloride, ferric sulfate, polyaluminum chloride (PACl) and aluminum chlorohydrate (ACH). Ferric chloride and ACH were found to be the best choice of product for effectiveness in removing TOC, a precursor to TTHM formation. Current ferric chloride dosages are too low and dosages of 100 mg/L or more are recommended. Again, please note, that the amount of chemical needed changes with the nature of the river and as such, water must be tested multiple times a day with corresponding changes in chemical dosages. This increase to 100 mg/L is twice what is currently being fed and much higher than what had previously been fed last year. The increase in chemical costs could be up to $1,000,000 per year. This change in dosage (using ferric chloride) can be made immediately without state permit review.
- **Reduction of Lime** – Lime is currently being overfed. A higher dosage of lime does not necessarily mean better treatment. A review of different dosages with jar testing indicates that the current dosage of 280 mg/L can be reduced to 230 mg/L. This represents a potential range of savings of up to $270,000 per year. This change can be made immediately. It should be noted that the current softening equipment is in poor condition, which does complicate the treatment process with a poor balance of flow between the two basins, weirs that are not level causing bypassing with the softener basins, and simply old mechanical equipment that periodically breaks down. This equipment is not going to be needed when a change to lake water occurs. Addition of soda ash to help further reduce hardness in cold weather might require dosages up to 40 mg/L with an annual chemical cost up to $320,000. There have also been some questions or complaints from the public regarding hard water. The water entering the plant is currently 360 mg/L and the plant is reducing that level of hardness to about 210 mg/L. Optimization of the dosage can reduce the hardness

further to about 180 mg/L. This reduction however has been sporadic as equipment breakdowns and high flows have caused problems keeping the softening process on-line. As we have noted before, the dosage needs to be adjusted daily or more often based on process control monitoring. The raw water hardness in the summer is much less than in the winter. For illustration purposes, the difference could be 360 mg/L in raw water in winter compared with 220 mg/Lin the summer.

- **Eliminate Pre-Chlorination on the Filters** – The reduction of pre-chlorination on the filters during the summer months can help reduce TTHM formation. This action has to be considered carefully with procedures documented and reviewed for engineering principles. As such, it will take time for the design engineer to determine what could be done to assure the proper chlorine contact time and document that other safety protocols in water are met. This requires state approval. Any submission should be considered along with a possible change in filter media. If Granulated Activated Carbon (GAC) is installed then the pre-chlorination would be stopped or drastically reduced because of the chlorine impact on the GAC filter media. Veolia's initial investigation into changes in chlorine feed point indicate that the recommended action can be accomplished while maintaining the required regulatory contact time for disinfection.
- **Change Filters to Granulated Activated Carbon (GAC)** – The object of the other changes being made is to reduce the TOC before chlorine is added into the process. The plant by design is limited on the amount of TOC removal possible. A maximum removal of only 60% is likely if the plant is properly optimized. The change of filter media to GAC would provide the best reduction possible and provide better than 90% removal dramatically reducing the potential for TTHM formation and thus ensuring compliance with that parameter for the water system. The change in filter media; however, is complicated requiring approval by the state, design of the changes, procurement of the media and a contractor to install it. That will take time and is likely in a range of $1.5 million (more or less) in cost. The use of GAC also requires more testing and monitoring of the media and the TOC than with the current media. GAC will accumulate TOC and begin to become in effective after a period of time. Depending upon the level of TOC reaching the filters this could be as short as 3 months and as long as 9 months. The amount of TOC is dependent upon the river water quality and operation of the other plant processes. Once the ability of the filters to remove TOC is diminished, the GAC media has to be replaced if river water continues as a source. The change to lake water will not require TOC removal and the media could continue to be used as filter media for that new water source.
- **Corrosion Control** – The primary focus of this study was to assure compliance with the TTHM limits. That is not the only problem facing the city and its customers though. Many people are frustrated and naturally concerned by the discoloration of the water with what primarily appears to be iron from the old unlined cast iron pipes. The water system could add a polyphosphate to the water as a way to minimize the amount of discolored water. Polyphosphate addition will not make discolored water issues go away. The system has been experiencing a tremendous number of water line breaks the last two winters. Just last week there were more than 14 in one day. Any break, work on broken valves or hydrant flushing will change the flow of water and potentially cause temporary discoloration.
- **Eliminate a Storage Tank** - The water system has more storage than it requires, due to excess capacity in the water lines in combination with the storage tanks. The City has already employed LAN to update the hydraulic model. The hydraulic model should be used to help determine if water levels can be lowered further and even to remove some storage tanks from service. That decision may need to be made

seasonally. For example demand during water main breaks last week required extensive amounts of water. The excess storage is more a problem with TTHM formation for the system in summer than winter.

- **Prioritize Valve Replacement** - The hydraulic model shows long water age in portions of the system that appear to be contributing to the TTHM problems. LAN has updated the model to include the location of broken valves and that added information is being used to identify other system problems. The City has a contract for valve turning and repair work that should be focused on known broken valves, particularly in sections of the distribution system with old water age. This activity however must wait until warmer weather in fear of causing problems in the water system with lines freezing.
- **Target and Increase Flushing** – Flushing the fire hydrants can be useful in cleaning out lines to minimize discolored water complaints and also helping reduce the age of water. This DOES NOT mean just opening hydrants. The hydraulic model needs to be used to determine which hydrants should be opened and for how long to ensure the lines are properly cleaned. For example, this might require 15 minutes or even several hours of flushing depending on location. The flushing of hydrants also needs to include records of hydrant condition, color of water initially and after periodic increments plus chlorine residual testing. All of that information will help provide information to the engineers on the effectiveness of the procedure. Each crew doing the work should be trained to help explain the process to the public and also warn neighborhoods about flushing so that staining of laundry can be avoided.
- **Change to Lake Water** – The changes being made now to the water plant will not be the same changes required to treat lake water once it becomes available. A thorough analysis and plan needs to be made in preparation of that switch. This is going to need to include changes in how the plant is operated, like eliminating lime softening and reducing the dosages of many chemicals. Consideration will also have to be given to algae treatment when lake water is being used.
- **Operating Programs** – All of the changes discussed above are based on testing and techniques proposed by engineers and skilled operators of both LAN and Veolia. The staff will need further training and implementation of detailed protocols to successfully implement the changes and to ensure long-term success at the plant. This means the City needs to implement a series of programs to ensure success in these changes.
    - **Process Control Management Plan** (PCMP) – The amount of testing and resulting changes in chemical dosages, along with monitoring the impact on the water, will require a well-documented process that all operators follow. An example of this is jar testing, which is used by the operators to identify the most effective chemicals and dosages to optimize treatment. The staff understands the basic treatment process but needs further practice and training to become proficient in the use of routine process control to adjust for water quality. This is commonly referred to as a PCMP and is used as a standard operating procedure so that the operators on the day shift can communicate with the night shift, that operators are following the same treatment plan for water, that the adjustments are unified between different shifts and different people, that a desired water treatment quality is defined and variations from it signal alarms and that the staff knows what to do when the water quality setpoints begin to drift away from its desired quality levels.
    - **Lab QA/QC** – The operation of the water plant is dependent upon accurate lab results. Standard operating procedure needs to be set and lab technicians trained in that process. EPA and the State

set procedures and standards to be met and the staff should strive to meet those standards. The City has already purchased a TTHM analyzer but should also consider a TOC analyzer that can be an online continuous device to provide immediate information on influent and effluent levels of TOC. Part of the lab records should be historical review of data to help operators better understand the changes they make in the plant.

- **Maintenance Management** – The key to water equipment is having all the equipment effectively maintained and functioning properly. The current capital program is fixing many broken pieces of equipment and updating the plant to current standards. This however must be followed with a rigorous maintenance program that ensures the proper preventive maintenance, is able to predict when maintenance is needed to keep equipment functioning properly and responsive to changes in flows and source water quality.
- **Training** – The changes being suggested are new to the staff and as such training needs to be provided in what the changes involve, why they are being made, the impact on the water quality, and how best to run the plant. A good demonstration of skill level is for the staff to become certified by the State as a licensed water plant operator. Many utilities now require all operators to hold at least the minimum certification level as a starting point and offer incentives to increase their certification level.

- **Communication Program** – The city should lay out an immediate, written strategy for communicating with the public in the short-term, as well as a 6-to-12 month strategy that contemplates known, future events like the KWA pipeline and switch to lake water. A wide range of activities are underway to work with the public but a comprehensive and coordinated effort, with a strategic focus, will help the utility and its customers.
  - **Dedicated Communications Personnel** – The City has a single, dedicated public information officer, tasked with providing service to all of city government. The current focus on communications support for Public Works, and the anticipated needs over the next several years, indicate the city would benefit from the hiring of a staff person in Public Works who could establish a communications program designed to provide clear and concise information to a broad audience though a number of different channels. In the interim, the city could hire a communications intern, local communications firm, or somebody with experience who is able to provide reduced or no-cost services for the immediate future.
  - **Communications Planning – Public Notification** – The City should be congratulated on its efforts to keep the public informed. It is posting its monthly reports on the web page to provide transparency, though these reports are highly technical – and may be too technical for the customer base at large. They are valuable to those customers who do want this level of detail. The city should create a single-page dashboard of information that outlines the water utility's performance for the previous month, post the dashboard on the website, print copies for distribution at customer service or other reception areas, and be provided during speaking engagements or other events. This dashboard should be easy to understand, and include:
    - The number of water quality tests conducted the previous month
    - The number of violations reported

  - Whether these results are in or out of compliance
  - Information about other proactive measures such as main and hydrant replacements, or other programs to improve performance of the water utility
  - Benchmarking information so the reader has a greater understanding of how Flint compares with other similar utilities in the region and across the country

- **Public Meetings** –There should be additional, proactive coordination with neighborhood, community and civic groups to provide speakers on timely topics. Given the list of numerous responsibilities, the Public Works director cannot do it alone – the city should identify three or four other staff members, knowledgeable about the water utility who can also speak to various groups, provide information and answer questions. The development of an outreach strategy to target key neighborhood, community and civic groups also will advance the communications effort and the dissemination of information in both the short and long term.
- **Standard tools** – Work crews in the field are often the faces of the utility – the city should create standardized tools for communicating with the public that can be easily and quickly delivered to the community in the event of main breaks, flushing or pre-planned capital improvements. Tools should include:
  - Door hangers for individual distribution
  - Yard signs with simple messaging to be placed near work-sites
  - A simple tri-fold brochure with useful information about the utility and appropriate contact information
  - Specific flyers about a range of topics
  - Infographics about how the water system works, from the intake to the customer's site
- **Change in Billing Format** – The City currently has no real way to reach all customers on a regular basis and provide information. The city should consider changing from a billing postcard to using an envelope and bill stuffer. Monthly or bi-monthly bill inserts are typically used to provide educational material for customers and are standard ways to provide information. Understandably, budget considerations must be taken into account.
- **Use Public Affairs Programming and Opportunities** – The news media has been covering this topic quite extensively – there are other media-related opportunities that may reach a wider audience. Taking advantage of these opportunities will help the city relay information to its customers and the community.
  - Participate in regular editorial-board meetings to provide background information and updates on key milestones or events.
  - Identify a local weekly television program and offer to provide guests to speak about key milestones or upcoming events.

Conclusions and Next Steps

The focus of this report is to help assure TTHM compliance and then improve general water quality. The City had good results in its most recent TTHM tests, although that is to be expected with the changes made to date and the cooler weather which contributes to low TTHM formation. Warm weather will be a different situation both in the nature of the Flint River water quality and in the formation of TTHM. With those changes coming, the City needs to act quickly to make improvements before additional testing takes place this spring and summer. The summary below provides the recommended actions, a priority for their implementation and projected costs either operational or capital. The costs are rough orders of magnitude and will vary with changes in water quality, operational decisions, and engineering choices being made and in some cases require State approval. Although a priority is assigned many of these actions can take place simultaneously.

Priority	Action	Annual Operational Cost	One Time Capital Cost
1	Implement operating programs for process control, lab QA/QC, maintenance, and training. These programs are needed regardless of the TTHM issue and will help with transition to lake water. The City has decided upon a central maintenance software and the water system should be the first to utilize this program since costs are already budgeted. These programs should be initiated immediately.	$ 25,000	$ 250,000 - $ 350,000
2	Contract with your engineer and initiate discussions with the State on the reduction of chlorine prior to the filters and changing the filter media to GAC. This activity has the longest time frame for design and approval, but also is extremely critical to assuring reduced TTHM production. The current filter cleaning and maintenance project needs to be adjusted to take into consideration the change in filter media both to dispose of the anthracite instead of cleaning and to install the GAC. This entire project needs to be done by early July to assure a flow of water throughout the system. Several months are required for the engineering design, State approval, bidding of work and installation of GAC and as such needs to begin now.	$ 0	$1,500,000
	Contract with your engineer and initiate discussions with the State on the addition of 0.5 to 1.2 mg/L of either potassium permanganate (dry) or sodium permanganate (liquid). This will take time to get approved and to implement. The use of liquid tanks at the raw water pump station may be the quickest and least expensive alternative for a temporary measure.	$ 160,000 - $ 320,000	$ 50,000

	Contract with your engineer and initiate discussions with the State on the addition of a corrosion control chemical. This action can be submitted and discussed with the state at the same time as the other chemical and filter changes saving time and effort. A target dosage of 0.5 mg/L phosphate is suggested for improved corrosion control.	$ 50,000	$ 50,000
3	Increase the ferric chloride dosage to 100 mg/L depending on river water TOC levels. (Lower TOC levels can be treated with less ferric chloride.) This change can be made now and is allowed by the State.	$ 1,000,000	$ 0
	Reduce the ozone feed rate to 5 mg/. This change can be done now and does not require State approval.	($50,000 – $100,000	$ 0
	Reduce the lime dosage to minimize hardness levels after softening. This will eliminate magnesium removal during treatment, but will also reduce total hardness. A reduction in carbon dioxide dosing for recarbonation treatment also is expected due to the reduction in lime feed. This change can be made now and does not require State approval.	($270,000)	$ 0
4	Confirm with the engineer when the revised hydraulic model will be completed and if necessary for time to focus on areas of longest water age if that would speed up the effort. Identify impact of reducing tank levels or eliminating a tank seasonally to improve water age. Include with this effort a list of hydrants to flush along with time required to assure drawing fresh water through the system. The engineer has been assigned this task already and confirmation of the timing of a delivery is needed.	$ 0	Already Contracted
	Ask the engineer to identify closed valves on a map that are impacting water age and that can be bid for replacement as soon as weather permits. Have the engineer identify areas of the system where the valve contractor should be focused on finding and fixing closed valves.	$ 0	Already Budgeted
5	Implement the recommendations in the communications program including a person assigned to public works education, using envelopes instead of cards along with bill stuffers for education and provide training for staff. Envelopes and bill stuffers are expensive and might be done periodically and not every month. The cost of TTHM notices, Annual Water Quality Reports and City notices should be figured into if any additional costs would exist. Many of these changes are underway now by the City.	Position Being Budgeted	

Notes

- The costs provided are rough order of magnitude which final engineering will firm up but will fluctuate with final decisions on engineering, operating technique and water quality.
- The change from river to lake water will dramatically cut the chemical costs as less is needed once the change occurs. This means that potassium permanganate will likely not be needed, ferric will drop as much as it went up, ozone levels will be lower and little lime will be needed.

Results Expected

The real question is what changes can be expected from these results in lowering the TTHM, improving the aesthetics and preparing for the change to lake water.

- TTHM – The City has already made great strides in reducing the TTHM levels with the changes already made. The additional suggestions by Veolia will further reduce TTHM in the water and help get the city released from the notices being provided to customers.
- **Hardness** – The hardness entering the plant this winter is 360 mg/L with the current system reducing it to 210 mg/L and optimization will reduce to about 180 mg/L. During the summer the levels will be lower probably in the 140 mg/L to 150 mg/L range. The target set by the current best operating practices is 120 mg/L to 150 mg/L.
- **Discolored Water** – The discolored water is caused by the old unlined cast iron pipe. The water from the plant can have an impact on discolored water, but a greater concern is the breaks and construction work that disrupt the flow of water causing discoloration. A polyphosphate is suggested to help bind the old cast iron pipe reducing instances of discolored water. This along with improve flow of water and programmed hydrant flushing will help, BUT WILL NOT eliminate discolored water occurrences.
- **Change to Lake Water** – The recommendations include the suggestion of programs to help the staff better manage the treatment process, additional testing to adjust the plant and additional lab monitoring, a maintenance program focused on keeping equipment properly functioning and more training for staff to improve their skill level. Those actions will prepare the staff for the change of water sources when it comes next year in addition to developing a thorough plan for the switch.

Resourcing the world

From: Wyant, Dan (DEQ)
Sent: Sunday, October 18, 2015 4:30 PM
To: Snyder, Rick (GOV)
Cc: Wurfel, Sara (GOV); Agen, Jarrod (GOV); Muchmore, Dennis (GOV); Clement, Elizabeth (GOV)
Subject: FW: Detroit News Flint II
Attachments: Detroit News Flint II.docx

Governor,

Attached is our response to the Detroit News for a story that they are preparing for tomorrow. Part of that story looks at whether the DEQ staff followed appropriate federal protocols in light of Flint's population size.

My responses, enclosed here, are an effort to acknowledge something that has come out in the past week through internal review. Simply said, our staff believed they were constrained by two consecutive six-month tests. We followed and defended that protocol. I believe now we made a mistake. For communities with a population above 50,000, optimized corrosion control should have been required from the beginning.

Because of what I have learned, I will be announcing a change in leadership in our drinking water program. I've spoken with Dennis about this, and will be making that announcement as part of the Detroit News article that likely will be out tomorrow.

We've spoken with Jarrod and Sara about this today as well.

Call me if you have any questions. Thank you.
[redacted]

Dan Wyant, Director
Department of Environmental Quality
[redacted]New Number)

From: Wurfel, Brad (DEQ)
Sent: Sunday, October 18, 2015 3:54 PM
To: Agen, Jarrod (GOV); Clement, Elizabeth (GOV); Muchmore, Dennis (GOV)
Cc: Wyant, Dan (DEQ); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: Detroit News Flint II

All,
Need your review of this document. It's our response to Detroit News story they're prepping for tomorrow.

Per Sara, Dan will call Jarrod shortly to discuss what we're proposing to do here.
Thanks,
b

Brad,

After reviewing the emails made available through FOIA, there are several things that seem to need addressing.

1. It appears DEQ staffers have essentially downplayed or ignored warning signs from EPA's water expert, Miguel Deltoral. We have been aware of Mr. Deltoral's unofficial memo that went public in April. But his email dated two months earlier on Feb. 27, to Jennifer Crooks and Mike Prysby, he seems to lay out exactly what's come to pass...

"(Particulate lead readings) Folks tend to discount these values as anomalies, but particulate lead release is a normal part of the corrosion process and it is universal (common) in all systems. It's just that it's not captured as often by the infrequent LCR sampling. If systems are pre-flushing the tap the night before collecting LCR compliance samples (MDEQ) still provides these instructions to public water systems) this clears particulate lead out of the plumbing and biases the results low by eliminating the highest lead values. If systems are pre-flushing and still finding particulate lead, the amount of particulate lead in the system can be higher than what is being detected using these "pre-flushed" first-draw samples.

"My point on that was that people are exposed to the particulate lead on a daily basis, but the particulate lead is being flushed away before collecting compliance samples which provides false assurance to residents about the true lead levels in the water."

Miguel goes on to address the optimal corrosion control situation in that same Feb 27 email.

"If I remember correctly, Detroit is feeding (phosphate) for the lead/copper rule, but since Flint is no longer part of that interconnection, I was wondering what their OCCT was. They are required to have OCCT in place which is why I was asking what they were using."

So what I'm seeing here is Miguel having raised these issues as far back as February. When unofficial April memo shows up, it's clear these issues still haven't been addressed.

Another email from the day before came from Jennifer Crooks at EPA which also highlights early concern about a lack of proper corrosion controls as well as the testing methods.
"The City can't just flush in advance of taking the compliance samples, they have to flush the lines on a regular basis."

Can you respond to the fact that it appears the state ignored or disregarded several warnings from EPA officials about testing deficiencies and insufficient corrosion controls?

Emails offer snapshots of a much broader conversation. The program staff did not ignore the information. They believed they were handling the situation in full accordance with federal protocols, and contacted EPA Region 5 officials promptly to seek guidance. They were more than halfway done with compliance sampling under the federal protocol and the 90th percentile samples to that point showed 6 pbb – barely in excess of the 5 pbb threshold.

2. Corrosion control, or the lack thereof, seems to be another major problem here. At the first of the recent press conferences, Dan Wyant said that lime was being used as a corrosion control method. But that is clearly contradicted by DEQ staff at several points. One of those is Pat Cook's email from April 24.
"Flint is currently not practicing corrosion control treatment at the (water treatment plant)."
This puts Dan's comments about the lime into question.
There's been some confusion on this point, and I think it was addressed in our previous response. This was a misunderstanding with technical staff. Lime was added to soften the water. While it adjusts pH and can have some impact on corrosivity, it was insufficient corrosion control.

3. I gather from several exchanges in here that EPA and DEQ disagree over that the state's responsibility was in ensuring there was optimal corrosion control. One of the emails from July includes notes from a meeting of all the parties shows that EPA was asking why that hadn't been used from the outset, and the state's response was something along these lines:

""MDEQ explained that they did not treat the switch to Flint River water as a "new system," but as a new source. It is their understanding that two rounds of 6-month testing is still needed to characterize the water quality. They don't know what optimized is until those two rounds of six month monitoring are completed."

Under the lead copper rule, was the state required to have phosphate treatment in place? It appears here that the state chose to interpret the CLR as not requiring corrosion control. That seems like a highly dubious conclusion.

And after concerns were raised repeatedly beginning (at least as early as February), why was nothing done?

What has become clear in recent weeks is that staff believed they were handling the situation in accordance with the proper protocol for a water provider using a new source, but the federal Lead and Copper rule has a particular provision for communities over 50,000 people; that the system operator must continue treating with full corrosion control even as they test the water.

What the staff did would have been the proper protocol for a community under 50,000 people. None of the DEQ staff in this division had ever worked on a water source switch for a community over 50,000 people – it's uncommon for our big communities to switch sources.

It's increasingly clear there was confusion here, but it also is increasingly clear that DEQ staff believed they were using the proper federal protocol and they were not.

The Governor will soon announce an independent, third party, after-action review to detail what happened and why, and offer steps to make sure Michigan's drinking water program is on a better course in the future.

4. Another area of concern, one I mentioned on the phone, is the pace of response. And I understand that the lead copper rule lays out response times. But you have concerns being raised about lead by an EPA expert as far back as February. The state's response, in several instances, is that federal guidelines give us two six-month periods to collect samples, and then more time to submit an action plan, and then a year or more to enact that plan.

   While those delays in making a change may be permitted under the law, given that we're talking about a possible public health crisis, why wasn't there more expediency? The responses in these

emails appear to be without any sense of urgency at a time when Flint residents may have been drinking dangerous water.

The results of two rounds of water testing showed the city needed to move to optimizing its corrosion control. That order was issued Aug. 17.

5. At many points along the way, serious concerns are made about the state's testing methods. The Virginia Tech results were not the first time someone had indicated state testing – as approved by federal guidelines – might not be giving accurate readings.

> Miguel's April memo reads: "I wanted to follow up on this because Flint has essentially not been using any corrosion control treatment since April 30, 2014 and they have (lead service lines). Given the very high lead levels found at one home and the pre-flushing happening in Flint, I'm worried that the whole town may have much higher lead levels than the compliance results indicated, since they are using pre-flushing ahead of their compliance sampling."

There is substantial controversy over the lead and copper rule – the EPA has been working for years on ways to update it, and Michigan will be an active part of that conversation going forward. The situation in Flint is a snapshot of an issue affecting cities around the state and the nation. More than a dozen states use the sampling protocol Michigan uses – that's not a defense of the protocol, but rather an indication that even experts on the issue disagree about the most effective testing methods.

What everyone can agree on is that lead is a serious issue. And I think everyone can agree that when the state came to recognize that there could be a health threat in the city, we took appropriate action. We are now engaged in an unprecedented effort to protect kids and families in Flint, develop more knowledge about what has happened and how people were affected, and take steps to make sure it doesn't happen again – in Michigan, or anywhere else.

All the people who brought this issue forward deserve credit for bringing it to us. Our actions reflected inexperience, and our public response to criticism was the wrong tone early in this conversation. But the best we can do with the situation going forward is represented in our present course – the Governor's plan represents all the suggestions outlined in the draft EPA memo, the Virginia Tech report, and the guidance we've gotten from EPA.

We will learn from this. We will make necessary changes to see to it that our program becomes a national leader in protection.

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 7:42 AM
To: Snyder, Rick (GOV)
Cc: Agen, Jarrod (GOV); Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Scott, Allison (GOV)
Subject: Re: Flint water question from Mildred

Absolutely, had talked with Allison about that. DHHS is double checking just in case and will help track down ASAP.

Sent from my iPhone

> On Oct 21, 2015, at 7:38 AM, Snyder, Rick (GOV) <[redacted]> wrote:
>
> She claimed that two Flint children were in critical condition over lead. Her source was Rev. Bullock. I said I wasn't aware of that and that all of the identified children were being tracked by public health officials. Please check on the status of children with higher level of lead.
>
> Thanks
> Rick
>
> Sent from my iPad

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 9:21 AM
To: Snyder, Rick (GOV)
Cc: Agen, Jarrod (GOV); Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Scott, Allison (GOV)
Subject: Re: Flint water question from Mildred

From DHHS on this particular Q/issue: Dr. Eden Wells spoke this am with Dr. Mona Hannah Attisha, Dr. Lawrence Reynolds and the lead Public Health nurse at the Genesee County Health Department and there is absolutely no information to support the claims made by the Reverend on Mildred Gaddis' show. Dr. Hannah Attisha also checked the Intensive Care Unit and there were no patients similar to what the Reverend described.

Additional Background:
MDHHS has daily communication with the Genesee Co. Health Department via daily calls at 3 p.m. and Dr. Eden Wells also communicates frequently with Dr. Mona Hanna Attisha of Hurley and Dr. Lawrence Reynolds who heads up Pediatrics of Hurley.

We will follow up with Mildred. And we should definitely consider if/who follows up with Rev Bullock as well - Harvey? Dennis?

Sent from my iPhone

On Oct 21, 2015, at 8:00 AM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Would quickly add that DHHS has almost daily conference calls with the local public health department in Flint. Nothing like this has come up to date. But again they are working to double and triple check.
>
> Sent from my iPhone
>
> > On Oct 21, 2015, at 7:41 AM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:
> >
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Thanks

Rick

Sent from my iPad

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 10, 2015 4:28 PM
To: Snyder, Rick (GOV)
Cc: Agen, Jarrod (GOV); Murray, David (GOV); Clement, Elizabeth (GOV); Muchmore, Dennis (GOV)
Subject: FW: Flint water school testing results
Attachments: School results PR.docx; Flint water - DEQ schools data - Points & FAQs.docx

Importance: High

Governor –

Per our conversation at our comms meeting today, here is the news release and background/highlights of DEQ's schools water testing data that was released yesterday.

DEQ also has video that they're using for some footage of the testing with TV stations. Link here if you want to check out: https://youtu.be/Amy4cDW7RtA

Sill no exact word on timing of blood lead level data from DHHS – hopefully by late this week.

Please let us know if you have any Qs or would like anything else at all.

Freeman Elementary water testing shows lead exposure limited to fixtures

Experts release water testing results on schools and homes in Flint

As part of Gov. Rick Snyder's action plan for Flint drinking water, the DEQ today released water testing data from nearly 400 homes and businesses in Flint as well as comprehensive sampling results from Freeman Elementary School.

Both sets of data indicate the problems with lead are localized to individual buildings or even individual faucets, rather than system-wide issues.

"The results from this data underline the need for water testing at all homes, businesses, schools and other buildings in Flint," said George Krisztian, the DEQ's Flint Action Plan Coordinator. "Problems with lead exposure appear to be localized to individual service lines or plumbing fixtures, and we want to see all families in Flint take advantage of free water testing from the state."

Freeman Elementary testing results
At Freeman Elementary, 31 faucets were tested using a series of four samples each. Twenty-two outlets did not show elevated lead exposure, but nine faucets came back with initially high results.

Those nine outlets involve brass components, indicating the problem involves the fixtures or plumbing immediately surrounding the fixture. When the faucets and fountains were operated for several minutes, lead levels fell significantly, in some cases to non-detectable levels.

Additional testing designed to look deep into the school's plumbing did not suggest larger, systemic issues.

Freeman Elementary has several options for remedying the issues at these nine faucets and fountains. The school can elect not to use those particular fountains, or implement a formalized flushing regimen. The sampling results indicate that for all but one tap, a 3- to 4-minute flushing period each morning would drastically reduce lead exposure.

For a permanent solution, the school should opt to replace the faucets and fountains of concern.

"The safety and health of our students are our primary concern at Flint Community Schools, so we will start work as soon as possible to replace faucets, aerators and other related components where high lead levels were detected," FCS Superintendent Bilal Tawwab said. "Once those fixes have been made, the DEQ has offered to provide additional testing of the water at Freeman Elementary to ensure the water from every sample is safe for our students. Flint Community Schools appreciates the efforts by the DEQ, working with all stakeholders to make sure our water continues to be tested and that our students have access to safe, clean drinking water."

For Freeman Elementary's complete sampling results and more information about how sampling was conducted, visit www.michigan.gov/flintwater.

The DEQ and the DLARA also have conducted sampling at other Flint schools, and results will soon be available on the DEQ's website. Additionally, the state will test every other school in the Flint Community Schools district, as well as any school or daycare in the city. Interested schools and daycare centers should contact George Krisztian at krisztiang@michigan.gov.

Homeowner and other customer-requested testing results
Results from the 381 samples from homes, businesses, schools and other facilities that took advantage of free water testing through the state showed similar, localized results. More than 75 percent of the samples analyzed demonstrated lead results of 5 parts per billion or less, and more than 91 percent demonstrated lead results of 15 parts per billion or less.

This data suggests that while some homes experience elevated lead level results due to lead service lines or in-home plumbing, many other homes experience little to no lead. This can make it difficult for homeowners and businesses to predict their lead exposure.

"Since it's not easy to predict if an individual home's water is at risk for lead, the best thing all residents can do is get their water tested," Krisztian said. "It's a free test that provides valuable information for families."

Testing is available for free by contacting the Flint Water Plant at 810-787-6537 and pressing 1, or by emailing flintwater@cityofflint.com.

For more information about water samples received through the state's free testing program, visit www.michigan.gov/flintwater.

How school sampling was conducted
To conduct this comprehensive sampling, the DEQ and Michigan Department of Licensing and Regulatory Affairs began on Oct. 23 with a thorough plumbing assessment of the school to gain a comprehensive understanding of how water moves through the building and what types of plumbing materials are used. The assessment also identified 31 faucets or fountains in the school that provide water for drinking, cooking and/or food preparation.

On Oct. 24, the DEQ and DLARA took four, 125-milliliter samples from each of the 31 identified faucets and fountains. The first two samples were taken immediately after turning on the faucet, followed by a 30-second flush and then the third sample, followed by a 2-minute flush and then the fourth sample. These samples provided information on the impact of any lead sources in or around each specific faucet and fountain as well as its connecting plumbing.

On Oct. 31, the DEQ and DLARA took an additional 30 samples, 10 each from three sites in the school. These 1-liter samples were taken consecutively, and provided information about the impact of any lead sources deep in the building's plumbing.

Michigan Department of Environmental Quality
News Release

Nov. 9, 2015

For More Information:
George Krisztian, 517-284-6719, krisztiang@michigan.gov

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Talking Points on Freeman Announcement

Q: How do we describe the home tests?

A: The home tests are a surveillance-level screening tool. It is the same test used by the state to comply with the federal Lead and Copper Rule.

Q: SO, a safe reading doesn't mean my water is safe?

A: A low reading means there are no fixture-related issues. This screening may not catch impacts of a lead service line to the home. If a homeowner isn't sure whether they have a lead service line, the best way for homeowners to be absolutely sure is to have a certified plumber inspect their home.

Q: Does home plumbing inspection mean they dig up my yard?

A: Usually, no. A good plumber can usually assess the service line from the point of entry to the home.

Q: Was the inspection of the schools done with a different kind of testing? If so, how so?

A: Yes, the testing at the schools is a very thorough protocol designed to first determine if there are fixture-specific issues, then look deeper into the system to identify possible lead plumbing issues.

Q: What was learned by the testing at Freeman Elementary?

A: We identified 9 of 31 sites where the plumbing clearly was imparting lead into water. Importantly, we did repeated draws of the water at these spots over several minutes, and saw lead levels drop dramatically. This means the lead is in the fixtures, not in the water lines. It means the fixtures need to be addressed in some way – flushing for several minutes will help, but replacement of these fixtures offers a more permanent solution. And it means the water at Freeman is safe at 22 of the 31 sites inspected, which is of some reassurance to school officials.

Q: The City is now using water from Detroit. When will the water be free from lead again?

A: The water from Detroit is treated with phosphates, which coat the insides of lead home service lines and will reduce lead impacts. The City also will be adding additional phosphates to develop this coating more quickly, but it could take months for corrosion control to be achieved throughout the system. It is important to note that, even in systems where optimal corrosion control exists, lead components in home plumbing can still cause lead exposure. Removing lead from home plumbing is the only permanent solution to address lead in home water supplies. And testing is the best way to get an accurate sense of one's exposure. In Flint, blood testing for children is free, and surveillance testing of water for any resident also is free.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, November 17, 2015 5:25:07 PM
To: Snyder, Rick (GOV)
CC: Scott, Allison (GOV)
Subject: FW: Privileged Attorney-Client Communication - Outline of Flint Drinking Water Issues

Attachments: DEQ's Outline of Flint Drinking Water Issues for Flint Water Task Force - Attorney Client Privilege Work Product -11-16-2015.pdf

I thought you should see this. It's pretty interesting. Whether anyone accepts it as gospel is problematic, but it's good on background.

From: Anderson, Madhu (DEQ)
Sent: Tuesday, November 17, 2015 11:20 AM
To: Ken Sikkema (ksikkema@pscinc.com) <ksikkema@pscinc.com>
Cc: Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Weber, Travis (GOV) <WeberT7@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>
Subject: Privileged Attorney-Client Communication - Outline of Flint Drinking Water Issues

Ken – Attached is the outline of the Flint Drinking Water issue (in a question and answer format) we have prepared for you to share with your colleagues on the Governor's Flint Water Task Force. Please let me know if we can provide any other material in preparation for the meeting tomorrow.

cid:image001.png@01CDA7B6.5323BD30

Madhu R. Anderson

Deputy Director, Economic and Strategic Initiatives

([redacted]

* {HYPERLINK "mailto:andersonm30@michigan.gov"}

cid:image003.png@01D087F1.09CAD420

City of Flint Drinking Water
Outline prepared by the
Michigan Department of Environmental Quality for the
Flint Water Task Force

I. INTRODUCTION

This document is intended to provide an overview of Michigan's implementation of the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), with respect to events in the city of Flint (City), Michigan.

II. BACKGROUND

1. How has Flint historically obtained its drinking water?

The water system in the City was organized and built under private ownership in 1883 as the Flint Water Works Company to pump raw water from the Flint River to their consumers. In 1903, the system was converted to a municipally-owned corporation which supplied drinking water to the City. In 1967, the City became a customer of the Detroit Water and Sewerage Department (DWSD) system.

After the switch to DWSD, the City operated its water treatment plant as a standby plant for purposes of reliability in the event of an emergency, such as an interruption in service of the single pipeline from DWSD. In the last ten years, the water treatment plant was used as an emergency backup during two weeks in 2009: June 18 through June 20 and September 10 through September 13.

As a backup emergency water treatment plant, the City was required to operate the water treatment plant quarterly to demonstrate the capability to produce drinking water in accordance with Act 399 and to keep mechanical equipment (such as valves, rubber seals, etc.) in good working order. Each quarter, the water treatment plant was test run and samples were taken of both raw water and finished water (post-filters). Since the water treatment plant was upgraded in the early 2000s, monitoring showed that the water treatment plant was performing as designed.

Contractual obligations with DWSD did not allow treated water to be put into the City's distribution system during these test runs. Treated water was discharged to the Flint River in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit. The test runs were for demonstration purposes, to keep the water treatment plant operational, and staff familiar with operation in the event it was needed in an emergency.

2. What State and Federal laws or rules exist to ensure safe drinking water is provided to City residents?

The federal Safe Drinking Water Act (federal SDWA) is the primary law that ensures the quality of Americans' drinking water. Under the federal SDWA, the United States Environmental Protection Agency (USEPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

The federal SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (The federal SDWA does not regulate private wells which serve fewer than 25 individuals.)

Originally, the federal SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

The most direct oversight of water systems is conducted by state drinking water programs. States can apply to the USEPA for "primacy," - the authority to implement the federal SDWA within their jurisdictions - if they will adopt standards at least as stringent as the USEPA's and enforce those standards. Michigan adopted the Safe Drinking Water Act in 1976 through Act 399 and has maintained primacy for the program since that time.

3. What is the USEPA's role as a regulatory agency in implementing the SDWA?

Federal and state governments share responsibility for administering drinking water programs. Under the federal SDWA, the USEPA is given the responsibility for developing national standards and regulations that apply to the nation's public drinking water systems and enforcing those standards, by working with states.

Michigan's drinking water program is evaluated annually by the USEPA for compliance with the federal SDWA. Based upon these evaluations, the USEPA continues to find Michigan's drinking water program to be compliant with the federal SDWA.

4. What is the Michigan Department of Environmental Quality's (DEQ) role as a regulatory agency in implementing the SDWA?

The federal SDWA permits states to accept oversight of the drinking water program under an agreement with the USEPA giving states primary enforcement responsibilities (or primacy). In addition to this delegation of federal authority to the states, states also have the power to create additional regulations and programs governing drinking water suppliers through their own legislative and regulatory processes. Michigan has had regulatory authority of public water supplies since 1913 (Waterworks and Sewerage Systems, 1913 PA 98).

The DEQ has been granted primary enforcement authority in Michigan for the federal SDWA under the authority of Act 399. As such, the DEQ, Office of Drinking Water and Municipal Assistance, has regulatory oversight for all public water supplies, including approximately 1,400 community water supplies and 10,000 noncommunity water supplies. A community water supply provides year-round service to 15 or more living units (homes, apartments, dorm rooms, etc.) or 25 or more residents. A noncommunity water supply has 15 or more service connections or serves 25 or more individuals on an average daily basis for not less than 60 days per year.

The DEQ engages in a variety of activities to help water systems remain in, or return to, compliance. These activities include: conducting surveillance visits (inspections) at water systems and reviewing facilities, equipment, and operations; requiring the submission of plans and specifications for waterworks system improvements and issuing construction permits; providing for the training, examination, certification and regulation of persons operating water supplies; helping systems incorporate preventive measures; and since 1996, providing financial assistance for system improvements.

5. What is the City's role in implementing the federal SDWA and Act 399?

State and federal programs develop regulations and perform oversight and compliance activities, but do not treat or deliver water to customers. At the local level, public and private water utilities collect, treat, and deliver drinking water to consumers in compliance with state and federal regulations.

The federal SDWA and Act 399 set up multiple barriers against contamination. These barriers include: source water protection, multiple treatment components, distribution system integrity, proper operations oversight, and public information. As the owner of a public water system, the City is responsible for knowing and following all requirements under Act 399, such as ensuring proper design, construction, operations and maintenance, so that contaminants in tap water do not exceed the standards established by law. The City treats the water, and must test its water routinely for specified contaminants and report the results to the DEQ. If a water system is not meeting these standards, it is the water supplier's responsibility to notify its customers.

The federal SDWA and Act 399 recognize that customers have the right to know what is in their drinking water and where it comes from. The City, like all water suppliers, must notify consumers when there is a problem with water quality.

The City submits samples of its water for laboratory testing (monitoring) to verify the water it provides to residents meets all federal and state standards. How often and where samples are taken varies from system to system and from contaminant to contaminant. The DEQ provides an annual monitoring schedule to the City setting forth these requirements.

In addition, the City is required to employ properly certified water operators that are trained and experienced to operate the treatment and distribution systems associated with the City's water system.

6. What approvals were needed from the DEQ in order for the City to begin using its water treatment plant full time?

The City had long ago been issued construction permits for raw water pumps to withdraw water from the Flint River and the City was grandfathered under the water withdrawal program (Part 327, Great Lakes Preservation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended), as were all existing community public water systems at that time. There were no additional DEQ

permissions or authorizations required under Act 399 because the City already had approval to use the water treatment plant.

Under Act 399, there are no licenses or permits required to operate public water systems. The City did apply for and obtained two construction permits prior to the water treatment plant changing from an emergency backup plant to full-time operation. These permits were for new chemical feed equipment, changes to the electrical service, etc.

III. THE FLINT RIVER – IS IT A SAFE SOURCE OF DRINKING WATER?

Seventy-five percent of Michigan's population served by a public water supply receive their drinking water from surface water sources, the majority of which is withdrawn from the Great Lakes. However, several public water supplies in Michigan utilize water from inland rivers. All surface water sources require significant treatment in order to be safe for consumption.

While all surface water sources must receive a high level of treatment, inland river sources present a greater challenge than water withdrawn from one of the Great Lakes because of rapidly changing water quality conditions. Under most circumstances, rivers are prone to greater fluctuations in temperature, have higher amounts of organic material, greater turbidity (suspended solids), and are more vulnerable to microbiological and viral contamination than Lakes Huron, Erie, Michigan or Superior. While the water chemistry in the Flint River differs from that in Lake Huron, it can still be treated in accordance with the federal SDWA and Act 399. The waterworks industry has the technology to treat wide ranging source waters to provide potable and palatable drinking water, including direct reuse of treated wastewater. Regardless of source water quality, all public water systems must comply with the same drinking water standards in the finished water.

It is not the source water that reacts with the homeowners plumbing in the distribution system, but rather the finished water quality that is important. Treated water leaving the City's water treatment plant does not contain lead. In addition, the treatment process employed by the City includes lime softening to reduce the hardness in the river water. The City includes lime softening and pH adjustment primarily to improve aesthetic water quality associated with hardness. Lime softening is not a process that water supply professionals would expect to increase corrosivity of water. The City, however, does practice recarbonation to readjust pH at the end of the softening process.

pH levels of finished water leaving the City's water treatment plant averaged 7.7. Expanded water monitoring conducted quarterly at 25 sample sites located throughout the distribution system showed the following:

July – September 2014	average pH = 7.71	range: 7.56 – 7.86
October – December 2014	average pH = 7.88	range: 7.62 – 8.10
January – March 2015	average pH = 7.81	range: 7.60 – 7.99
April – June 2015	average pH = 7.63	range: 7.48 – 7.80

The data below was obtained at ten of the sampling locations throughout the City's distribution system, while they were still purchasing water from DWSD before the City switched to the Flint River as a source:

January – March 2014 (DWSD)	average pH = 7.47	range: 7.40 – 7.54
April 2014 (DWSD)	average pH = 7.49	range: 7.42 – 7.59

Note that the pH of the treated water produced while the City was using the Flint River did not differ significantly from pH values seen in the distribution system during the time the City purchased water from DWSD. Thus, pH monitoring provided no indication of a change in water corrosivity.

IV. *E. COLI* AND TOTAL COLIFORM BACTERIA VIOLATIONS

1. What caused the *E. coli* and total coliform bacteria violations experienced by the City in August and September 2014?

A number of factors, primarily related to distribution system operation and maintenance, likely contributed to the Boil Water Advisories in the City during August and September 2014 triggered by exceedances of bacteria standards in limited areas of the distribution system. In addition, the coliform detections were confined to less than 20 percent of the water system. Had the detections been the result of a failure in treatment, detections would have been expected throughout the City rather than in such a limited geographic area.

Instead, the violations seem to have been caused by other factors such as aging infrastructure. The City's water distribution system has suffered from a lack of infrastructure investment and asset management. Most of the City's over 550 miles of water mains are now over 75 years old, and constructed of unlined cast iron piping. This cast iron pipe is subject to tuberculation, which thins and weakens the pipe walls in some areas and causes a buildup of sediment and debris on the pipe walls in other areas. Tuberculation can lead to water quality issues as well as reduced flows and pressures. Tuberculation also encourages the development of biofilms. Biofilm growth may occur more frequently in areas where little or no disinfectant is maintained.

The City has also experienced decades of a declining customer base and water use, with vacant homes, commercial businesses, and industrial property. Declining water use leads to excess residence time (water age) within the City's distribution pipes and water storage facilities, accelerating tuberculation, biofilm growth, and reductions of disinfectant concentration in the distribution system. While the City has recently seen an infusion of funding for blight removal, contractors using fire hydrants to complete this work have been known to cause hydraulic disturbances that dislodge and suspend settled debris, which may contribute to the bacterial contamination. These hydraulic disturbances were also believed to be a source of the aesthetic water quality complaints both the City and the DEQ were receiving.

The winter of 2013-2014 was also one of the coldest experienced by the water system. The City, which historically has unaccounted water losses of over 30 percent, saw even greater losses since February 2014 due to an increase in cold weather-related water main breaks and leaks (City personnel reported 400 water

main breaks in calendar year 2014, with greater than 50 percent in the winter quarter). The City has also been lacking a formal maintenance program for its more than 7,250 valves, which are critical in limiting the areas impacted during water main repairs. As an example, two valves on the transmission line used to supply the area of the 2014 Boil Water Advisories were found to be closed during the City's investigation of possible sources, causing much longer residence times, reduced disinfectant concentrations, and reduced pressures – all potential avenues for contamination to enter a distribution system.

The Boil Water Advisories also occurred during the warmest and relatively wet periods of August and September 2014. Warm weather conditions are not only more conducive to bacterial growth but also degrade disinfectant concentrations more quickly. As already explained, longer residence times, biofilms, and tuberculation contribute to lowered disinfectant concentrations. Warm, wet weather conditions also allow water contaminated with bacteria to accumulate or pond around piping that leaks and breaks.

During the summer of 2014, the City was actively repairing the distribution system (City personnel reported 29 water main breaks in June through August 2014). After the switch to the Flint River, it was discovered that there were many broken or closed valves in the distribution system (City personnel reported 120 broken valves and 239 valves in an improper position). As the City began correcting these problems, they did detect the presence of coliform organisms in the distribution system in testing conducted as a result of the repairs. This sporadic detection is not an unusual occurrence. Many communities have experienced similar issues when significant repairs are made in the system and/or they suffer water main breaks and localized pressure losses.

2. How were the violations detected? What was the DEQ's response?

Federal SDWA regulations regarding monitoring and standards for bacteria in water distribution systems are incorporated into Act 399. There are a variety of bacteria, parasites, and viruses which can potentially cause health problems if humans ingest them in drinking water. Testing water for each of these potential pathogens would be difficult and expensive. Instead, community water systems are required to test monthly for total coliform and *E. coli*. Total coliform bacteria, while not pathogenic, often originate from the same sources as many pathogens. Therefore, the presence of total coliform in drinking water indicates there may be a pathway for pathogens or other contaminants to enter the system. The absence of total coliforms in the distribution system indicates a minimal likelihood that pathogens are present. *E. coli* is itself a pathogen and its detection is considered direct evidence of a health risk.

The Boil Water Advisories which occurred in the City were associated with bacteria monitoring detections and violations of bacteria standards. These advisories were issued by the City after consultation with the DEQ.

Upon receiving information indicating total coliform and *E. coli* bacteria had been detected, the DEQ advised the City to issue a Boil Water Advisory from August 15 through 20, 2014, for the affected portion of the City. Another Boil Water Advisory was issued from September 5 through 9, 2014, due to localized detections of total

coliform bacteria in the same and adjacent portions of the City. The advisories covered an area of less than 20 percent of the water department's service area.

Once a Boil Water Advisory has been issued, time is needed to investigate potential causes and implement corrective measures. The larger the water system, the more time this may take. Once corrective measures have been taken, samples must be collected and analyzed to confirm that bacteria are no longer present. Under approved analytical methods used by the City, samples must be incubated for 24 hours before results can be obtained. In situations where the bacterial contamination has been confirmed, two consecutive rounds of safe samples collected at least 24 hours apart are normally obtained before canceling a Boil Water Advisory. Adding each of these steps together, a normal response period to rescind a Boil Water Advisory under these circumstances would be expected to take 3 to 4 days.

V. TOTAL TRIHALOMETHANES (TTHM) VIOLATIONS

1. What caused the TTHM violations experienced by the City beginning in late summer 2014?

Disinfectants are an essential element of drinking water treatment because of the barrier they provide against waterborne disease-causing microorganisms. However, disinfection byproducts form when disinfectants used to treat drinking water react with naturally occurring organic materials in the water (e.g., decomposing plant material). The formation of disinfection byproducts continues to occur as water travels throughout water distribution systems.

A major challenge for water suppliers is how to provide protection from pathogens while simultaneously minimizing health risks to the population from disinfection byproducts. Total Trihalomethanes (TTHM – chloroform, bromoform, bromodichloromethane, and dibromochloromethane) and halogenated acetic acids (HAA5 – monochloro-, dichloro-, trichloro-, monobromo-, dibromo-) are widely occurring classes of disinfection byproducts. The amount of TTHM and HAA5 in drinking water can change depending on the season, water temperature, amount of chlorine added, the amount of plant material in the water, and a variety of other factors. All community water systems that chemically disinfect or purchase water that has been chemically disinfected are required to monitor for disinfection byproducts.

The Flint River has higher levels of organic material than water in the Great Lakes and as a result, the water produced by the City developed higher disinfection byproducts than the water purchased from DWSD. Because the water treatment plant was previously operating intermittently, it was not possible to predict disinfection byproduct levels at distribution system compliance points until the City began relying on its water treatment plant continuously.

As mentioned previously, the City became aware that there were numerous broken valves and closed valves that should have been open in the distribution system. At that time, the City also began a mapping effort to identify "water age" in the distribution system. The longer the residence time or "water age" the greater the opportunity for the formation of disinfection byproducts.

2. How were the violations detected? What was the DEQ's response?

Disinfection byproducts are monitored at eight sites throughout the distribution system. A locational running annual average is calculated for each individual site. Because TTHM and HAA5 maximum contaminant levels are calculated based on a running annual average at specific distribution system locations, the actual violation of the standard did not occur until the fall of 2014. However, because it was apparent in the summer of 2014 that the standard would eventually be exceeded; the DEQ asked the City to proactively implement measures to address the problem before the violation required them to do so.

As a result of maintenance efforts undertaken by the City to repair valves and correct improperly closed valves, the City was able to improve water flow in the distribution system and thereby reduce residence time or "water age" in the system. Operational changes made to reduce the amount of storage in the system also helped reduce residence time which contributed to a reduction in disinfection byproduct formation.

In addition to operational changes to minimize residence time in the distribution system, the City added granular activated carbon to its filters in July 2015. Levels of TTHMs and HAA5s were reduced and the City returned to compliance on September 1, 2015.

VI. THE TASTE, ODOR, AND COLOR COMPLAINTS RECEIVED BY FLINT

1. What caused the taste, odor, and color complaints received by the City from residents?

Taste, odor, and color issues are very personalized. While water leaving the water treatment plant did not have any unusual taste, odor or color; during the summer after the switch to the Flint River, customer complaints increased. Construction in the distribution system, hydrant flushing, and changes in flow characteristics are all known causes of disturbances within the distribution system that can cause an increase in taste, odor, and color complaints. Aesthetics, such as taste, odor, and color, while a concern, by themselves are not a threat to public health.

2. What was the DEQ's response?

The DEQ consulted with the City regarding these complaints. The City indicated that they were offering to investigate such complaints for anyone that had issues; but City personnel informed the DEQ that they were not able to recreate these situations in the field. In addition, as a result of the repair work that was underway and the increased flushing to reduce water age in the system to help control TTHMs, it was anticipated that there would be short-term disturbances in the system that would cause color and odor complaints. All water supplies are advised to provide notice to residents prior to undertaking a flushing program because flushing (even routine flushing) often causes temporary problems as described. Based on information from City personnel, it appeared that the complaints were related to such operational activities occurring in the distribution system.

VII. LEAD ISSUES IN THE FLINT DRINKING WATER

1. What causes lead in drinking water?

Lead is rarely found in source water. Lead enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead fixtures and solder. Older homes built prior to World War II are more likely to contain lead pipes. The most common problem with newer construction is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water. The amount of lead in tap water also depends on the types and amounts of minerals in the water, how long the water stays in the pipes, the amount of wear in the pipes, the pH of the water, and its temperature.

2. What is the Lead and Copper Rule?

On June 7, 1991, the USEPA published a regulation to control lead and copper in drinking water. This regulation is known as the Lead and Copper Rule (also referred to as the LCR). The treatment technique for the rule requires systems to monitor drinking water at customer taps. If the 90th percentile for lead exceeds an action level of 15 parts per billion (ppb) or the 90th percentile for copper exceeds an action level of 1.3 parts per million (ppm), the system must undertake a number of additional actions to control corrosion. If the action level for lead is exceeded, the water supply must also inform the public about steps they should take to protect their health and the water supply may have to replace lead service lines under their control.

3. What is the lead action level?

For most contaminants, the USEPA sets an enforceable regulation called a maximum contaminant level based on the maximum contaminant level goal. Maximum contaminant levels are set as close to the maximum contaminant level goals as possible, considering cost, benefits, and the ability of public water systems to detect and remove contaminants at the water treatment plant using suitable treatment technologies. Because lead contamination of drinking water often results from corrosion of the plumbing materials belonging to water system customers, the USEPA established a treatment technique rather than a maximum contaminant level for lead. A treatment technique is an enforceable procedure or level of technological performance which water systems must follow to control a contaminant. Although the maximum contaminant level goal for lead is zero, based upon the above factors, the USEPA has established the action level for lead at 15 ppb.

The treatment technique regulation for lead requires water systems that produce drinking water to control the corrosivity of the water. The regulation also requires systems to collect customer tap samples from sites served by the system that are more likely to have plumbing materials containing lead. If the 90th percentile action level for lead is exceeded, then water systems are required to take additional actions including:

- Optimizing corrosion control treatment (for water systems serving greater than 50,000 people that have not fully optimized corrosion control).

- Educating the public about lead in drinking water and actions consumers can take to reduce their exposure to lead.
- Replacing the portions of lead service lines (lines that connect distribution mains to customers) under the water system's control.

4. Did DWSD have optimized corrosion control treatment?

After the LCR passed in 1991, DWSD and all of its consecutive customer systems conducted two rounds of monitoring for lead and copper. Copper levels were well below action level limits, but lead levels exceeded the action level of 15 ppb for DWSD and many of its customer communities. As a result, DWSD installed corrosion control treatment. DWSD performed a corrosion control study and concluded that they could reduce the corrosivity of the water by the addition of an orthophosphate, a corrosion inhibitor.

5. Did the DEQ require the City to have corrosion control in place when it switched to the Flint River as its source of drinking water?

No. There are two ways under the LCR to deem a water supply as providing "optimal corrosion control" – either by sampling and determining through a calculation that the supply is "optimal" or by installing treatment if it is needed. The DEQ requested that the City perform two 6-month rounds of monitoring to demonstrate if the City was practicing optimal corrosion control treatment. According to state regulations [R325.10604f(2)(b)(iii)], a system can demonstrate optimized corrosion controls by sampling in two, consecutive 6-month monitoring periods and comparing the results of this monitoring to the lead level in the source. Optimal corrosion control under this scenario would be defined as having the 90th percentile in each of these monitoring periods lower than the sum of the lead in the source and the practical quantification limit for lead of 5 ppb. Since the source water has 0 ppb lead, the City would have been deemed optimal if its 90th percentile of lead was 5 ppb or less in these two consecutive periods. However, once a system has installed treatment, it would also be considered optimized regardless of the 90th percentile level achieved, as long as it does not exceed the action level of 15 ppb.

In this case, the City had been purchasing water from DWSD that was treated for corrosion control. It was the DWSD water system that was considered as having optimized corrosion control at that point. Since the City water system had not been the supplier of water before, the DEQ did not require the City to maintain corrosion control for which it was not responsible [R325.10604f(2)(b)]. It could not "maintain" operations undertaken elsewhere by a different entity for a different source of water. The DEQ's instructions to the City were consistent with past practices afforded to all other large water systems. At the beginning of the LCR, all large systems were initially granted the option to demonstrate optimal corrosion control treatment through full-scale monitoring under the applicable rules. For these reasons, two 6-month rounds of monitoring, as required by the LCR, were the required means to determine whether or not optimal corrosion control was being achieved.

6. How does the DEQ calculate the 90th percentile?

To determine the 90th percentile of a list of lead or copper results, the procedure below is followed:

Step 1: Place lead or copper results in ascending order
Step 2: Assign each sample a number, 1 for lowest value
Step 3: Multiply the total number of samples by 0.9 – this yields the 90th percentile sample. For example: 20 samples x 0.9 = 18th sample. This is the 90th percentile level.

Calculating the 90th percentile is easiest when a supply collects 10 samples (or a multiple of 10). Note that the 90th percentile must be interpolated if the number of samples is not a multiple of 10.

7. What was the result of the first round of monitoring conducted by the City?

The first 6-month round of lead and copper monitoring conducted by the City ended on December 31, 2014. One hundred samples were submitted and the 90th percentile lead level was calculated to be 6 ppb. The next step required by the DEQ was for the City to collect a second round of monitoring.

8. What was the result of the second round of monitoring conducted by the City?

The second 6-month round of lead and copper monitoring conducted by the City ended on June 30, 2015. Sixty-nine samples that complied with the site selection criteria were submitted and the 90th percentile lead level was calculated to be 11 ppb. The conclusion from these results was that the City, while in compliance with the action level, exceeded the level required to be deemed as having optimized corrosion control.

9. Why was the City required to collect 100 compliance samples for lead and copper in the first 6-month monitoring period of July through December of 2014 and then only 60 compliance samples in the second 6-month period of January through June of 2015?

The number of compliance samples required for lead and copper is based upon the population served by the water system as identified in the table below, taken from Rule 325.10710a of Act 399.

Supply Size (Number of People Served)	Number of Sites (Standard Monitoring)	Number of Sites (Reduced Monitoring)
More than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Fewer than 101	5	5

The number of samples the City was required to collect in the first round of monitoring after they began relying on the Flint River was based on the 2010 census, which listed the City's population as more than 100,000 residents. In March of 2015, the City provided updated information that indicated the City's population had decreased to less than 100,000. Therefore, they were only required to collect 60 samples. There is no rule prohibiting the collection of additional compliance samples – only establishing a minimum number necessary.

10. What actions did the DEQ order the City to undertake after the second round of monitoring?

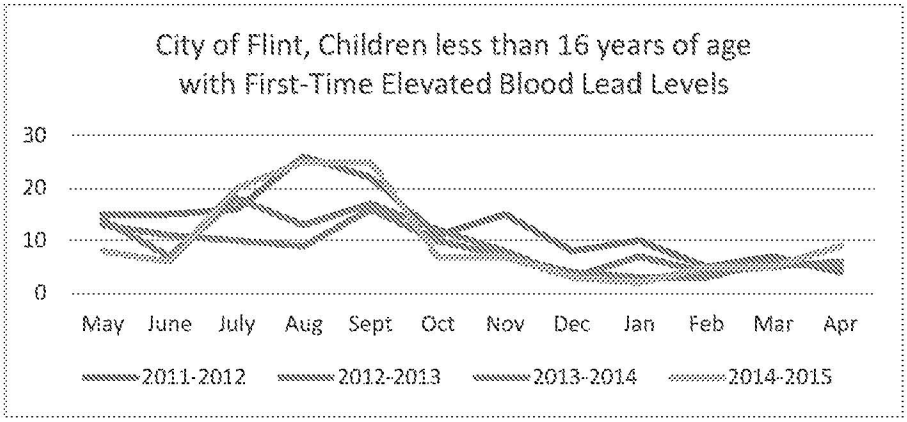
While the City's LCR compliance monitoring continued to meet action level requirements, the City exceeded the level required to be deemed as having optimized corrosion control. Following receipt of the City's compliance monitoring results, the DEQ sent a letter on August 17, 2015, requiring the City to install corrosion control treatment.

Under the LCR, the City has 6 months to let the DEQ know whether it intends to conduct a study, then 18 months to perform the study and make its recommendation, and 24 months to complete installation of the selected corrosion control. The DEQ requested the City accelerate this schedule. The City submitted plans and specifications to install corrosion control treatment and a construction permit was issued by the DEQ on October 28, 2015. The City is in the process of installing the necessary equipment and procuring the appropriate chemicals. Treatment is expected to be on-line by the end of November 2015. As of October 16, 2015, the City resumed purchasing water from DWSD that is already optimized and provides a corrosion inhibitor. The additional treatment by the City will further enhance the amount of inhibitor in the system.

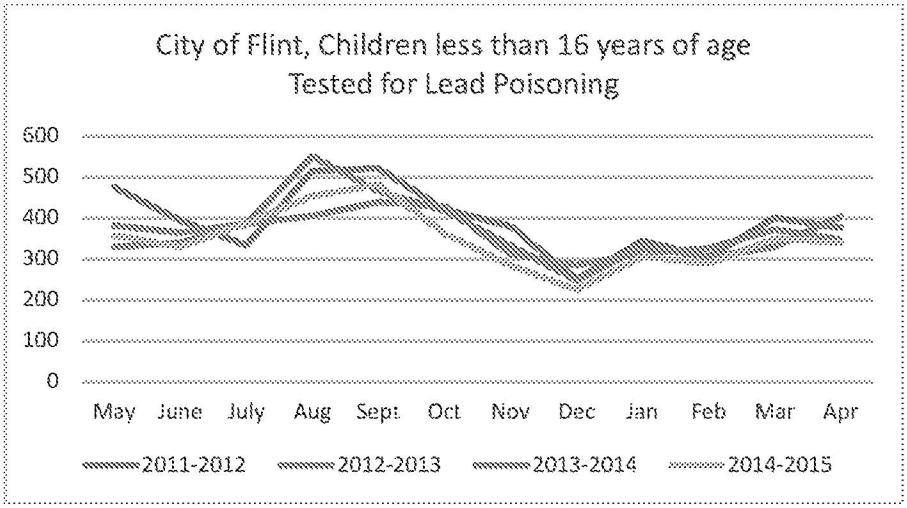
11. What had Michigan Department of Health and Human Services (DHHS) advised the DEQ regarding blood lead levels prior to the DEQ ordering the City to implement optimized corrosion control?

In an e-mail dated July 28, 2015, regarding blood lead testing, the Michigan DHHS indicated that they:

> "…compared lead testing rates and lead testing results to the same time frame for the previous 3 years, to see if there were any patterns that suggested that there were increased rates of lead poisoning after the water supply was switched. Per the attached charts –
>
> • Lead testing rates remained about the same from year-to-year…



- There was a spike in elevated blood lead tests from July-September 2014…



- However, that pattern was not terribly different from what we saw in the previous three years; especially in 2011-2012 (we are working with our Epidemiologist to statistically verify any significant differences).

- We commonly see a 'seasonal effect' with lead, related to people opening and closing windows more often in the summer, which disturbs old deteriorating paint on the windows, sills and sashes. Window fans frequently blow and spread the lead dust from the deteriorating paint to other parts of the room/house. We suspected that the summer data spike may be related to this effect.

- If the home water supply lines and/or river water were contributing to elevated blood lead tests, we expected that the increased rates would extend beyond the summer, but they drop quite a bit from September to October, stayed low over the winter, and are just starting to tail up again in the spring of 2015."

This e-mail from DHHS in concert with the completion of two 6-month rounds of lead compliance sampling data indicating that the City had not exceeded an action level for lead provided the basis for the DEQ to maintain that the water in the City continued to be in compliance with the federal SDWA and Act 399.

12. When did the DEQ first become aware of allegations of elevated blood levels being detected in certain children?

The DEQ was notified on August 23, 2015, by a professor from Virginia Tech that "over the next few months we will be studying Flint water quality issues…" Results indicating elevated lead levels in homes were reported as part of this study in late August. In September 2015, information was reported in news articles that

pediatricians in the City had data suggesting an increase in children's blood lead levels in two zip codes in the Flint area.

Prior to these dates, the City had already completed the required two 6-month rounds of monitoring and the DEQ had made a determination that the City must install corrosion control treatment as documented in correspondence dated August 17, 2015.

VIII. QUESTIONS RAISED REGARDING THE DEQ'S ACTIONS

1. **What was the DEQ's response to the USEPA's inquiry in February 2015 regarding the optimized corrosion control treatment being implemented by the City under the LCR?**

   The DEQ indicated that the City was complying with the LCR, the lead 90th percentile level was below the action level of 15 ppb, and the City was already conducting the second round of monitoring which would provide for a determination of whether additional treatment needed to be installed. It should be noted that once treatment is designated as optimal, there is no requirement in the LCR that lead results be lower than they were before treatment was installed. The 90th percentile only needs to be lower than the action level in the LCR.

2. **Did the DEQ attempt to mislead the USEPA in a February 27, 2015, e-mail responding to the USEPA's inquiry regarding Optimal Corrosion Control Treatment?**

   No. There was no attempt by the DEQ to mislead the USEPA. There is an e-mail from Steve Busch, Jackson and Lansing District Supervisor, Office of Drinking Water and Municipal Assistance, indicating that the City was practicing a corrosion control program. What was meant was that the City was performing the required monitoring to determine whether or not they were practicing optimized corrosion control. The DEQ subsequently clarified its position in follow-up e-mails and telephone conversations with the USEPA.

3. **When General Motors announced its intent to terminate water service from the City and purchase water from Genesee County, should this have been a sign that there were concerns with the quality of the water after the switch to the Flint River?**

   No. General Motors made a decision regarding the quality of water for its manufacturing processes. At the time, the company indicated that the chloride levels were above limits acceptable as part of the manufacturing facility's limit for production purposes. The level of chlorides in the water treated by the City was not a human health or aesthetic concern.

   Chloride does have a secondary maximum contaminant level established by the USEPA, not for health-related concerns but rather for taste and aesthetic concerns. Concentrations greater than the secondary maximum contaminant level of 250 milligrams per liter (mg/l) become objectionable due to taste. According to the City's records, the chloride concentration in the Flint River water is generally about 45 mg/l and the treated water chloride concentration leaving the water treatment

plant ranges between 55 and 65 mg/l. It should be noted that the City uses ferric chloride as its primary coagulant, although this does not add a significant amount of chloride to the finished water.

4. Has the USEPA subsequently admitted that the LCR is subject to differing interpretations such as that presented by the DEQ?

Yes. On November 3, 2015, the USEPA issued a memorandum regarding the "Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems". This memorandum addresses concerns raised about the application of the LCR, specifically the requirements pertaining to maintenance of optimal corrosion control treatment, in situations in which a large water system ceases to purchase treated water and switches to a new drinking water source. The USEPA states that this type of situation rarely arises, that the language of the LCR does not specifically discuss such circumstances, and that there are differing possible interpretations of the LCR with respect to how the rule's optimal corrosion control treatment procedures apply to this situation. The memorandum is intended to clarify, on a prospective basis, steps agencies should take or apply in the future. USEPA's new guidance provides acknowledgement that the LCR is subject to differing interpretations. The DEQ's interpretation and application of the LCR in this situation was in compliance with the federal SDWA and Act 399.

5. Did the DEQ reject any of the samples submitted by the City?

Yes, samples at two locations were excluded from the compliance calculation in conformance with rules issued by the USEPA.

According to the LCR, compliance samples must be a first draw, 1-liter sample collected from a cold water, kitchen or bathroom tap after the tap has stood unused for not less than 6 hours. Federal and state rules require community public water systems to identify a pool of targeted high-risk sampling sites, called Tier 1 sampling sites. For a municipality such as the City, the Tier 1 sampling pool must consist of single family structures that are:

- served by a lead service line,
- contain lead pipes, or
- contain copper pipes soldered with lead installed after 1982 but before Michigan enacted the ban on solder containing high concentrations of lead (June, 1988).

As long as a community has Tier 1 sites that contain lead service lines, they are required to collect at least 50 percent of their compliance samples from these lead service line sites. Finally, federal and state rules specify that "Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants." Such treatment devices include home softeners, iron filters, etc. Samples collected from multiple family residences, commercial buildings, institutional facilities, or single family structures with point-of-use or point-of-entry treatment can only be used if the community has insufficient Tier 1 sites available.

One of the samples submitted by the City was excluded from the 90th percentile compliance calculation in the latest monitoring period because it was taken from a tap at a non-residential site (non-Tier 1). The other sample result that was excluded was collected from a single family home that has a whole house treatment system. Both of these sites are, therefore, excluded from the compliance consideration based upon federal and state rules.

6. Did the DEQ review the information submitted by the City to ensure all samples were from Tier 1 sites?

Yes. The DEQ examined the information submitted and certified by the City that its LCR compliance monitoring sites consisted entirely of Tier 1 criteria sites, which met the requirements of this rule to maximize sampling of high-risk targeted sites.

During the initial implementation of the LCR approximately 25 years ago, water supplies were required to complete a materials evaluation of their distribution system to identify a pool of targeted, high-risk sampling sites. These sites were to be categorized into one of three Tiers (1, 2, or 3) based on risk. The DEQ created an LCR reporting template for water systems to identify each compliance sampling site by Tier, service line material, and building plumbing material.

If a water system has sufficient Tier 1 sites, they are required to sample them before using any lower Tier sites. Furthermore, if they have sufficient sampling sites with lead service lines, they are required to use them to make up at least 50 percent of their sampling pool each monitoring period. Water supplies are also required to use the same sampling sites each time or explain on their LCR reporting form why they were unable to do so. Finally, the water system is required to certify all of the information they provide on the LCR reporting form is factual.

The DEQ must rely upon the public water system to identify appropriate sampling sites for LCR monitoring. The DEQ public water supply program has no control or authority over service lines or domestic plumbing. As a result, we have no records on construction standards or materials used by customers for these components. If these records exist, they are kept by plumbing code enforcement officials.

In 2015, City employees again certified that the information submitted on their LCR monitoring reports for the two 6-month rounds of monitoring conducted after they began treating the Flint River were accurate, and DEQ staff review of that information indicated it was in compliance with the monitoring requirements. The DEQ had no reason to question the validity of the City's reports until the DEQ heard City employees revealing to the media that the City did not know for certain if its compliance monitoring was collected from homes with lead service lines. As a result, the DEQ began to investigate the City's monitoring sites. As the City began to transfer its customer information to electronic records, the DEQ determined from the information available that a significant number of these sites that had been listed as having lead service lines either did not have them or the information was unavailable. On November 9, 2015, the DEQ notified the City in writing that it would be necessary to conduct a complete assessment of its sampling pool and report back its findings by December 30, 2015. The DEQ is now awaiting the City's response.

7. Did the DEQ believe the levels of lead found at 212 Browning in April 2015 were indicative of a system-wide problem?

High levels of lead were collected in samples taken from this residence. It was determined to be coming from an unusually long lead service line. For some reason, this home was not connected to the water main that ran in front of the house, but rather to a main located on a street several houses away. The City replaced the lead service line May 6, 2015. Since the internal plumbing of the house is plastic, it was believed that replacement of the lead service line would resolve the problem, and subsequent sampling taken at this address showed that replacement of the service line did mitigate the problem. There was, therefore, no reason to believe that this was indicative of a system-wide problem.

8. Do the DEQ's sampling instructions comply with the LCR?

The DEQ continues to seek official clarification from the USEPA regarding the sampling protocols. The DEQ's sampling recommendations were developed to ensure compliance with the USEPA's guidance provided in the preamble to their lead and copper regulations that said that household use should be "typical" for a residential customer on the day before sample collection for lead and copper. Early in the implementation of the LCR, the DEQ had encountered too many situations where compliance samples had been collected from kitchen and bathroom taps that had not been used in days and in some cases, even weeks, resulting in excessively stagnated water and correspondingly high lead levels that did not represent typical exposure expected after overnight stagnation. To incorporate these results into further regulatory decision making could have led to actions that were not indicative of a true public health threat. Further complicating this issue was the USEPA's direct implementation of the LCR in Washington, D.C., where it was learned that some "valid" lead results were not always being included in compliance calculations. Subsequently, the USEPA made invalidation of samples for any reason much more difficult. In order to ensure samples were taken at customer taps representative of typical use, the DEQ devised the current recommendations for ensuring appropriate but not excessive stagnation for LCR monitoring.

The DEQ continues to believe it is appropriate to ensure that taps being sampled are representative of typical household use and are sampled during the recommended stagnation period of 6-18 hours. The LCR does not say the result should represent the "absolute worst case" condition – it talks about sampling the highest risk locations (lead plumbing, lead service lines, high lead content solder piping, etc.) after overnight stagnation and then collecting a first draw sample so as not to flush elevated lead from that tap at that point in time. There are a number of other states that share the DEQ's interpretation of the rule and the DEQ encourages the USEPA to provide official clarification directed at all states with primacy.

9. Does the DEQ require the use of small-neck bottles to obtain samples?

No. The DEQ does not mandate the use of small-neck bottles; it is the sampling method that is specified in both the federal SDWA and Act 399. Each certified drinking water laboratory provides bottles to their customers upon request for any particular analysis in accordance with the specifications in the SDWA. The bottles provided by the DEQ Drinking Water Laboratory for a lead and copper corrosion control sample meet these requirements.

From: Murray, David (GOV)
Sent: Monday, November 23, 2015 6:31 PM
To: Snyder, Rick (GOV); Agen, Jarrod (GOV)
Subject: Please review: Updated Flint blood lead levels and Strategic Fund FCA deal releases
Attachments: Flint EBL Data Press Release V3.docx; Flint Water Talking Points 111915 V4.docx; PR 151124_MSF_FCAStatement 2.docx

Good evening Governor,

These were two items that arrived too late for the briefing.

We continue to work with DHHS on the release of the press release regarding the blood lead level testing in Flint. We've asked for the numbers to be higher in the release, and this version reflects that. We've also asked for some historical information for context. It's believed that the levels were just as high in 2010, for example, when there was no question about the water source. I've indicated in the release where this would appear. DHHS will be able to provide these numbers going back at least five years and possibly longer in the morning. I've included updated talking points/background information as well.

Our thought is to release this information tomorrow.

The other release is announcing the Michigan Strategic Fund vote on the revised agreement with FCA.

Please let us know if you need additional information or have changes.

Thank you very much.

Dave

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STATE OF MICHIGAN
DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

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DIRECTOR

FOR IMMEDIATE RELEASE
DRAFT

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MDHHS releases October data outlining blood lead levels in Flint

Follow-up care, case management resources continue for families

LANSING, Mich. – The Michigan Department of Health and Human Services today issued data regarding blood lead levels in Flint children and adults. The department's summary report shows that 24 of 963 adults and children tested in Flint had elevated levels.

MDHHS is working closely with the Genesee County Health Department to reach out to families testing with higher levels and help them reduce their exposure to lead sources. The report is intended to inform residents about blood lead level testing efforts in Flint and provide cumulative total numbers.

"Our goal is to help families reduce their exposure to lead sources," said Dr. Eden Wells, MDHSS chief medical executive. "We have made progress in testing and identifying those with elevated blood lead levels, and the department will continue to work closely with the county health department to reach these families. We will update these numbers on a regular basis and remain diligent in our ongoing outreach and education."

Information was gathered from tests administered citywide to 963 children and adults between October 1 and October 30. Eighteen children age 17 or younger had elevated blood lead levels. Six adults over the age 18 were identified with elevated blood lead levels.

The data in the report include the total number of tests conducted and the total number of elevated blood lead levels greater than 5 micrograms per deciliter, and captures both capillary and venous blood tests. People who have had multiple tests are counted only once. The full report is posted online at www.michigan.gov/flintwater and will be updated as more data becomes available.

HISTORICAL INFORMATION FOR CONTEXT WILL BE INSERTED HERE.

The testing is part of the state's action plan to address health concerns related to Flint's water infrastructure.

Last month, MDHHS collaborated with the county health department and local partners to distribute educational resources and informational letter to Flint parents regarding lead testing. The state provided supplemental funding to support GCHD nursing staff to conduct direct outreach to families when an elevated blood lead level has been detected. These nurses serve as an important resource by addressing questions and concerns, providing information, and meeting with families in their home environment.

MDHHS continues to provide free water filters and replacement cartridges to Flint residents at four locations including the MDHHS Flint offices and the Genesee County Community Action Resource Department. For a full list of locations and hours of distribution, visit www.michigan.gov/flintwater.

To help residents properly install water filters, and to demonstrate how to replace the original when it expires, MDHHS has created an instructional on the MDHHS YouTube channel. For additional updates on Flint water including updates on blood lead levels and testing results, visit www.michigan.gov/flintwater.

# # #

Blood Lead Levels in Flint Talking Points
November 18, 2015

Blood Lead Level Testing Results

- The Michigan Department of Health and Human Services is releasing a report regarding blood lead levels in Flint children and adults in ZIP codes 48501-48507.
- The purpose of the report is to inform residents about blood lead level testing efforts in Flint and provides cumulative total numbers.
- It is not intended to be a technical report but a technical description, and further analysis of the data in the report is underway.
- The data in the report include the total number of tests conducted and the total number of elevated blood lead levels ≥5µg/dL (micrograms per deciliter), broken down by date and age ranges.
    - Specifically, the current report breaks down the data by the 16 months prior to the switch in water source for Flint (January 1, 2013 through April 14, 2014), to the 17 months after the switch (April 15, 2014 through September 30, 2015), and after the lead exposure prevention campaign was initiated by the State in Flint October 1, 2015 to October 30, 2015. These numbers will continue to be updated.
    - The report also breaks down the number of tests and elevated blood lead levels by children younger than 6, children ages 6-17, and adults 18 years and older.
        - Lead exposure for children younger than 6 is of particular concern because they are more sensitive to the effects of lead and tend to absorb more than older children and adults.
- Data in the report includes both capillary and venous blood tests. People who have had multiple tests are counted only once.
- 963 people were tested in Flint between October 1, 2015, and October 30, 2015, 18 children 17 years of age or younger had elevated blood lead levels. Six adults over the age of 18 were identified with elevated blood lead levels during this time as well.
- With these testing results, MDHHS is working closely with the Genesee County Health Department to conduct case management to ensure that these families are receiving the follow up care they need - including additional blood testing and a home investigation to identify and help reduce the potential for additional lead exposure in their environment.
- In addition to this report, MDHHS has ZIP code level data available by quarter for 48503-48507 by request. ZIP codes 48501-48502 do have some cases, but the numbers are too small to release by quarter.

Water Filters and Replacement Filters

- Our first action item is to work closely with our public and private partners to provide water filters to Flint residents and MDHHS clients.
- To meet this priority, the governor identified one million dollars in state funding to purchase water filters for Flint residents.
- The Brita SAFF-100 filters being distributed by the department and GCCARD do meet the NSF/ANSI 53 standards for drinking water treatment units.
- The Brita faucet filtration system we are distributing are National Sanitation Foundation certified to reduce lead in drinking water.
- Free water filters and replacement cartridges are available to current Michigan Department of Health and Human Services clients and Flint residents who are on the Flint water system at four locations:
    - Flint residents who are not current MDHHS clients should visit one of two Genesee County Community Action Resource Department offices to obtain a filter.
        - at 2727 Lippincott and 601 North Saginaw in Flint
    - Current MDHHS clients in the city of Flint should visit their local MDHHS office:
        - At 125 E. Union St. or 4809 Clio Road
- Staff will be onsite at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation.
- Given the questions and concerns regarding the change in water source in Flint, MDHHS authorized the use of emergency services funding to provide water filters for MDHHS clients receiving assistance in the city of Flint.
- This funding will support active Family Independence Program (FIP), Food Assistance Program (FAP), Child Development and Care (CDC), State Disability Assistance (SDA), State Disability Assistance (SDA), or Social Security Insurance (SSI) recipients so that they can obtain filters that are National Sanitation Foundation (NSF) certified to remove lead and ANSI Standard 53.
- MDHHS has also posted an instructional video on the MDHHS YouTube channel to help residents properly install water filters, and to demonstrate how to replace the original filter when it expires.
    - https://www.youtube.com/watch?v=plsOvmH__0
- MDHHS currently serves approximately 25,000 households in Flint.

Background Information

- Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend; due to small numbers further analysis was initiated.

- Director Lyon is working closely with DEQ and the administration to take active steps to reduce all potential lead exposures in Flint and across the state.
- Our Chief Medical Executive has been in communication with the lead investigator at Hurley Children's Hospital, and we continue to work with Hurley, the city of Flint, local and state leaders to verify and analyze data trends.
- ZIP code-level data does show that there has been an increase in elevated childhood blood lead levels in specific communities.
    - This does not conclusively mean that the water source change is the sole cause of the increase.
    - There is an increased proportion of children with elevated blood levels in several ZIP codes, particularly 03 and 04. These appear to have increased over the last 1.5 years.
    - Lead exposure can occur from a number of different sources (such as paint, gasoline, solder, and consumer products) and through different pathways (such as air, food, water, dust, and soil).
    - Although there are several exposure sources, lead-based paint is still the most widespread and dangerous high-dose source of lead exposure for young children in the US and Michigan.
- We reviewed MDHHS statewide data using the same methodology used by Hurley, looking at our numbers by ZIP code and age ranges, and filtering out non-Flint children.
- Routine surveillance of blood lead levels does not analyze data down to the ZIP code level. Detailed analysis like this occurs when there is reason to focus in on precise locations or populations.
- MDHHS is working closely with the Michigan Department of Environmental Quality, Hurley Children's Hospital, the Genesee County Health Department, and community organizations to initiate further action steps.
- We understand that cost may be a barrier to following the recommendations for drinking water, which is why NSF-certified filters are being distributed to residents on the Flint water system free of charge.
- MDHHS is recommending that residents follow the Public Health Advisory issued by the Genesee County Health Department, as well as take further steps to reduce exposures to all forms of lead in and around their homes.

MDHHS Stats and Facts

- 'High Risk' ZIP codes (48503 and 48504)
    - Blood lead level rates among children under six years of age in the high risk ZIP codes (48503, 48504) were 2.7 times higher than the rest of Genesee County before the switch to Flint River Water.
    - After the switch to Flint River Water, rates in the high risk ZIP codes were 3.2 times that of the rest of Genesee County.

- Other ZIP codes in Flint
    - Rates of elevated blood lead levels among children under six years of age in other parts of the city of Flint were 2 times that of the rest of Genesee County before the switch to Flint River Water.
    - The magnitude of the elevated rate remained roughly the same during the period after the water source switch.
- Lead abatement through MDHHS was federally funded up until FY14 when Michigan began providing additional funds to abate homes.
- In FY14, $1.25M General Fund was added. In FY15, General Fund was bumped up to $1.75M and FY16, General Fund remains at $1.75M.

Reducing and Removing Lead Exposure

- Use only cold filtered water from the tap for drinking, cooking, and making baby formula. Hot water is more likely to contain higher levels of lead. The lead in household water usually comes from the service line that connects your house to the water main or the plumbing in your house, not from the local water supply.
- In housing built before 1978, it can be assumed that the paint has lead unless tests show otherwise.
- Make sure your child does not have access to peeling paint or chewable surfaces painted with lead-based paint.
- Children and pregnant women should not be present in housing built before 1978 that is undergoing renovation. They should not participate in activities that disturb old paint or in cleaning up paint debris after work is completed.
- Create barriers between living/play areas and lead sources. Until environmental clean-up is completed, you should clean and isolate all sources of lead.
    - Close and lock doors to keep children away from chipping or peeling paint on walls. You can also apply temporary barriers such as contact paper or duct tape, to cover holes in walls or to block children's access to other sources of lead.
- Regularly wash children's hands and toys. Hands and toys can become contaminated from household dust or exterior soil. Both can be lead sources.
- Regularly wet-mop floors and wet-wipe window components. Because household dust is a major source of lead, you should wet-mop floors and wet-wipe horizontal surfaces every 2-3 weeks.
    - Windowsills and wells can contain high levels of leaded dust. They should be kept clean. If feasible, windows should be kept shut to prevent abrasion of painted surfaces or opened from the top sash.
- Take off shoes when entering the house to prevent bringing lead-contaminated soil in from outside.

- Prevent children from playing in bare soil; if possible, provide them with sandboxes. Plant grass on areas of bare soil or cover the soil with grass seed, mulch, or wood chips, if possible.
    - Until the bare soil is covered, move play areas away from bare soil and away from the sides of the house. If you have a sandbox, cover the box when not in use to prevent cats from using it as a litter box. That will help protect children from exposure to animal waste.
- Avoid using makeup, containers, cookware, or tableware to store or cook foods or liquids that are not shown to be lead-free.
- Remove recalled toys and toy jewelry immediately from children.
- Shower and change clothes after finishing a task that involves working with lead-based products such as stained glass, making bullets, or using a firing range.

If possible, shower and change before returning home if your job requires you to work with or around lead. These jobs can include painting, plumbing, and some factory work.

WIC Children

- There are 855 infants participating in WIC in Flint.
- We are working with partners at the United Way to ensure that WIC families have access to water filters and bottled water.
- In homes with infants on WIC, if the household has documentation from an official source documenting unsanitary water supply issues, that family may be eligible to receive ready-to-feed formula. Families should contact WIC to see if they are eligible.
- Each household will be considered on an individual basis.
- WIC cannot cover bottled water.

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray, Governor's Office 517-335-6397 Emily Guerrant, MEDC 517-862-5462	Tuesday, Nov. 24, 2015

Gov. Rick Snyder: Fiat Chrysler Automobiles agreement strengthens state budget planning, ensures continued investment in Michigan

LANSING, Mich. -- The Michigan Strategic Fund today approved a revised agreement with Fiat Chrysler Automobiles (FCA) that caps the state's liability for previous tax credits while requiring additional investment and job creation in Michigan, Gov. Rick Snyder said.

"Today's agreement with Fiat Chrysler Automobiles is an essential step in helping us better manage our state budget, while finding common ground that will ensure the company will continue to invest and create jobs in our state for years to come," Snyder said. "We appreciate FCA for its continued partnership and willingness to help us provide greater economic certainty as we work to keep reinventing our state's economy."

The MSF resolution revises the agreement with Chrysler Group, LLC, now known as FCA US LLC, capping the state's liability for previously authorized job retention tax credits and providing incentives for FCA to invest an additional $1 billion in Michigan in the future. The resolution reduces the term of the Global MEGA Tax Credit by two years, sets annual limits on the tax credit value that may be claimed in a given year, and provides stability and predictability for the timing of payments for annual Global MEGA tax credits throughout the life of the tax credit.

In addition, the company will provide periodic forecasts of its estimated tax credits to the state to assist the MSF and state of Michigan in budget planning.

###

From: Agen, Jarrod (GOV)
Sent: Monday, December 28, 2015 8:25 PM
To: Snyder, Rick (GOV)
Cc: Baird, Richard (GOV); Scott, Allison (GOV); Clement, Elizabeth (GOV)
Subject: Flint letter
Attachments: Snyder Letter EPR v5-Clean.docx; ATT00001.htm

Governor,

Attached is a letter from the Flint Water Task Force which will be formally sent to you tomorrow. The Task Force then plans to release this letter publicly on Wednesday morning.

You will see the letter is harsh against DEQ.

Rich, Redford, Harvey, Meegan, and myself all just gathered on a conference call to discuss our upcoming actions regarding Flint. While we don't think this letter should change any of our actions, we agreed we may need to accelerate some of the structural changes at DEQ.

Our suggestions:

1) **Make structural changes at DEQ as early as tomorrow:** The recommendations in this letter suggest profound change at DEQ and openly criticize Director Wyant. If this is the path that the Task Force is on, it is best to make changes at DEQ sooner rather than later. That likely means accepting Dan's resignation. It also means moving up the termination of the 3 DEQ personal previously planned for Jan 4 to tomorrow.

2) **Still do statement tomorrow from you regarding Flint:** This statement will be slightly revised by Meegan to acknowledge we received feedback from the Task Force and reiterate that we created the Task Force with the intent of getting honest independent feedback. More importantly, if we are making changes at DEQ, they can also be announced in the statement.

If you have a moment, it is probably best that Rich & I discuss with you over the phone tomorrow morning. But I wanted to get you some of our thinking tonight.

Let me know if there is a good time to discuss tomorrow.

Thanks
Jarrod

Dear Governor Snyder:

The Flint Water Advisory Task Force, which you appointed on October 21, 2015, has devoted considerable effort and countless hours to our review of the contamination of the Flint water supply: what happened, why it occurred, and what is needed to prevent a recurrence in Flint or elsewhere in the state. We have also been assessing ongoing mitigation efforts to help assure that short- and long-term public health issues and water management concerns will be properly addressed to safeguard the health and well being of the Flint community.

Shortly after we began our work, we recognized the immediate need for better coordination of the state's response to the ongoing public health issues in Flint, and for assignment of a single person to provide this coordination. We addressed these concerns in a letter to you on December 7, 2015, and you responded with immediate adoption of these recommendations. We thank you for the commitment your response demonstrates.

In our continuing efforts, we have now interviewed numerous individuals at state and local levels; reviewed many documents, articles, and emails; and deliberated repeatedly as a group. Both individually and as a group, we have visited Flint several times during the past several weeks to meet with citizens, public health officials and healthcare providers, individuals who have water management responsibilities at the city and county levels, and other public officials.

It is clear to us, particularly as we listen to the people of Flint, that it is both critical and urgent to establish responsibility for what happened in their community and to ensure accountability. This is a first step in a long process to re-establish the trust they no longer have in their government and the agencies whose responsibility it is to protect their health. It is urgent because this deep distrust of government continues to compromise the effective delivery of protective services designed to address ongoing public health issues. It is for these reasons that we are sending this letter at this time.

We believe the primary responsibility for what happened in Flint rests with the Michigan Department of Environmental Quality (MDEQ). Although many individuals and entities at state and local levels contributed to creating and prolonging the problem, MDEQ is the government agency that has responsibility to ensure safe drinking water in Michigan. It failed in that responsibility and must be held accountable for that failure.

The Safe Drinking Water Act (SDWA) places responsibility for compliance with its requirements on the public water system. In this instance, the City of Flint had the responsibility to operate its water system within SDWA requirements, under the jurisdiction of the MDEQ. The role of the MDEQ is to **ensure** compliance with the SDWA through its regulatory oversight as the primary agency having enforcement responsibility for the Flint water system.

The MDEQ failed in three fundamental ways.

<u>Regulatory Failure</u>

We believe that in the Office of Drinking Water and Municipal Assistance (ODWMA) at MDEQ, a culture exists in which "technical compliance" is considered sufficient to ensure safe drinking water in Michigan. This minimalist approach to regulatory and oversight responsibility is unacceptable and simply insufficient to the task of public protection. It led to MDEQ's failure to recognize a number of indications that switching the water source in Flint would—and did—compromise both water safety and water quality. The MDEQ made a number of decisions that were, and continue to be, justified on the basis that federal rules "allowed" those decisions to be made. ODWMA must adopt a posture that is driven not by

this minimalist technical compliance approach, but rather by one that is founded on *what needs to be done to assure drinking water safety.*

A culture change must occur within ODWMA. It must be driven by a mission that is aspirational regarding the role of the MDEQ in ensuring the safety and the quality of Michigan's drinking water. We believe, and have expressed to MDEQ Director Dan Wyant, that as a Great Lakes State, Michigan should aspire to have the safest drinking water in the nation, rather than merely aiming for technical compliance with regulatory requirements.

Failure in Substance and Tone of MDEQ Response to the Public

Throughout 2015, as the public raised concerns and as independent studies and testing were conducted and brought to the attention of MDEQ, the agency's response was often one of aggressive dismissal, belittlement, and attempts to discredit these efforts and the individuals involved. We find both the tone and substance of many MDEQ public statements to be completely unacceptable. In a real way, the MDEQ represents the public, including the very individuals it treated dismissively and disrespectfully in public statements. We recognize that the agency might disagree with the opinions of others on a variety of issues, including testing protocol, interpretation of testing results, the requirements of federal law and rules, and other matters. What is disturbing about MDEQ's responses, however, is their persistent tone of scorn and derision. In fact, the MDEQ seems to have been more determined to discredit the work of others—who ultimately proved to be right—than to pursue its own oversight responsibility.

Failure in MDEQ Interpretation of the Lead and Copper Rule

The federal Lead and Copper Rule (LCR) is central to what happened in Flint, because that rule, at least theoretically, is designed to prevent lead and copper contamination of drinking water. The federal LCR calls for "optimized corrosion control treatment," which the MDEQ did not require in the switch to the Flint River. Prior to the switch, MDEQ staff instructed City of Flint water treatment staff that corrosion control treatment (CCT) was not necessary until two six-month monitoring periods had been conducted. The need for CCT would be evaluated after the results from those two monitoring periods were reviewed. The decision not to require CCT, made at the direction of the MDEQ, led directly to the contamination of the Flint water system.

The MDEQ seems to have taken different positions on whether it faithfully followed the LCR in the Flint situation. It first maintained that it followed the LCR, then stated that it did not follow the rule properly, and most recently claimed that a federal memorandum issued by the US EPA in early November 2015 suggests that the original MDEQ interpretation was possibly correct.

We are not convinced. Even the MDEQ's latest interpretation of the US EPA's November memorandum is overly legalistic and misunderstands the intent of the LCR, which is to minimize risks of lead and copper exposure for human health.

We believe ODWMA's single-minded legalistic focus is the heart of the problem, and it is part of the "technical compliance" culture described above. ODWMA should not be basing its actions solely on a legally possible interpretation of the LCR. It should be focusing on how to protect Michigan's citizens from lead in drinking water.

We met with MDEQ Director Wyant on December 16, 2015, to discuss these issues, as well as many others. We note his substantial agreement with many of our conclusions, particularly as it relates to the regulatory failure and the abysmal public response of his agency. It is our understanding that he has drawn similar conclusions in his own evaluation of the MDEQ's role in the Flint water crisis. At the same

time, it was disappointing to hear his weak defense of the CCT decision based on the EPA's November 2015 memorandum.

We are not finished with our work. Other individuals and entities made poor decisions, contributing to and prolonging the contamination of the drinking water supply in Flint. As an example, we are particularly concerned by recent revelations of MDHHS's apparent early knowledge of, yet silence about, elevated blood lead levels detected among Flint's children. We also feel it important to further review local government decision processes under emergency management. Our final report will highlight and discuss those concerns, among many others, to provide some context to a comprehensive series of recommendations. **As stated earlier in this letter, however, we believe that establishing responsibility is a critical and urgent need, and one that should not wait for our final report in 2016. Individuals and agencies responsible must be held accountable in a timely fashion.**

It is our hope that the heightened awareness of the dangers of lead poisoning can be an opportunity to make Michigan safer, particularly for its children. Drinking water must be recognized as a potential source of health risk exposure when water lines and fixtures containing lead are disturbed or compromised. Proper testing, not only in high-risk areas but also in facilities serving children (e.g., schools), must be considered. Facilitating long-term financing of a model public health program, and also replacement of lead-containing water service lines and fixtures, would enable Michigan to realize a positive lasting legacy from the tragedy of the Flint water crisis. Our final report will address some of these issues.

The City of Flint's water customers—fellow Michigan citizens—were needlessly and tragically exposed to toxic levels of lead through their drinking water supply. They deserve a commitment to properly assess responsibility and ensure accountability. They also deserve a commitment to needed mitigation in both the short and long term. The Flint water crisis never should have happened. Having failed to prevent it, state government should coordinate a sustained, public-health-focused response to remedy, to the fullest extent possible, the impacts on the Flint community.

Respectfully yours,

Flint Water Advisory Task Force:

Ken Sikkema
Chris Kolb
Matt Davis
Larry Reynolds
Eric Rothstein

From: Agen, Jarrod (GOV)
Sent: Monday, December 28, 2015 10:37 PM
To: Baird, Richard (GOV); Snyder, Rick (GOV)
Cc: Clement, Elizabeth (GOV); Scott, Allison (GOV)
Subject: RE: Flint letter

10:30 am tomorrow works.

Draft statement below. Language regarding Dan is included, pending our discussion tomorrow.

DRAFT STATEMENT

"When I became aware that the city of Flint's water showed elevated lead levels and that many the state's handling of the situation was being questioned, I appointed an independent task force to investigate how the situation evolved and identify missteps and areas for improvement.

"The task force has done an exceptional job and has been relentless in focusing on the facts. It so far has reviewed stacks of documents and interviewed scores of Flint, Genesee County, state and federal officials, and keeping me and my team apprised of its progress.

"Although the task force's final report is not yet completed, it has made me aware of some interim findings and corrective steps that I have decided to take immediately to restore trust in how the state keeps its citizens safe and informed.

"No matter what the testing requirements were, they were not enough to prevent this situation. Moving forward we will listen intently and be more responsive to community needs.

"I am accepting the resignation of MDEQ Director Dan Wyant, and have made other personnel changes to address problems cited by the task force.

"Changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on the Flint water issue to be our partners in helping us improve Flint water. Let's share research on water and blood lead level testing to arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're doing proper monitoring and remediation of health impacts over the short and long term.

"I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure containing lead lines.

"I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss other ways the state can offer assistance.

"These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we're committed to doing everything we can to protect the well-being of our citizens."

From: Baird, Richard (GOV)
Sent: Monday, December 28, 2015 10:24 PM
To: Snyder, Rick (GOV) <[redacted]
Cc: Clement, Elizabeth (GOV) <clemente@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Scott, Allison (GOV) <scotta12@michigan.gov>
Subject: Re: Flint letter

10:30 good by me.

Sent from my Verizon Wireless 4G LTE DROID
On Dec 28, 2015 10:14 PM, "Snyder, Rick (GOV)" <[redacted] wrote:

If it works, let's do a call at 10:30 tomorrow. Also, please send me the latest version of my proposed statement.

Thanks
Rick

Sent from my iPad

On Dec 28, 2015, at 8:24 PM, Agen, Jarrod (GOV) <AgenJ@michigan.gov> wrote:

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Jarrod

<Snyder Letter EPR v5-Clean.docx>

From: Snyder, Rick (GOV)
Sent: Thursday, April 18, 2013 12:30 PM
To: Scott, Allison (GOV)
Subject: COS items

A few items to add:

Flint/DWSD

[redacted]

Thanks
Rick

Subject:	RDS - REMARKS (AHeaton) Press Conference Re: Flint Water
Location:	Mott Foundation Conference Center, 503 S. Saginaw, Flint
Start:	Thu 10/8/2015 9:00 AM
End:	Thu 10/8/2015 9:42 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	GovCalendar
Required Attendees:	Agen, Jarrod (GOV); Biehl, Laura (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Lyon, Nick (DHHS); Grijalva, Nancy (DHHS)
Optional Attendees:	Heaton, Anna (GOV); Wurfel, Sara (GOV)

Purpose: Press conference regarding Flint water

Program Participants:
Flint Mayor Dayne Walling
DEQ Director Dan Wyant
DHHS Director Nick Lyon
Dr. Eden Wells, DHHS
Ridgeway White, Mott Foundation
Harvey Hollins
Sen. Jim Ananich

Non-Speaking Invitees: (all attendance unconfirmed)
Rep. Tim Greimel
Rep. Phil Phelps
Rep. Sheldon Neely
Flint City Councilmembers
Faith Based Community members
U of M Flint Chancellor Susan Borrego (RDS talked to 10/7/15 at the Higher Ed Summit)
Amy Hovey, Staff of Congressman Dan Kildee
Jamie Gaskin, CEO of Genesee County United Way
Tim Herman, CEO of Flint and Genesee Chamber of Commerce
Brian Larkin, Flint and Genesee Chamber of Commerce (fmr. EO staff)
Kathryn Thomas, VP of Communications for Mott Foundation
Neal Hegarty, VP of Programs for Mott Foundation
Kimberly Roberson, Director of Flint Area Grantmaking Program for Mott Foundation

Agenda:

10:00 AM – 10:01 AM	Harvey Hollins kicks off press conference; introduces Governor
10:01 AM – 10:05 AM	Governor gives remarks
10:05 AM – 10:06 AM	Harvey Hollins introduces Mayor Dayne Walling
10:06 AM – 10:10 AM	Mayor Walling gives remarks
10:10 AM – 10:11 AM	Harvey Hollins introduces DEQ Director Dan Wyant
10:11 AM – 10:15 AM	Director Wyant gives remarks
10:15 AM – 10:16 AM	Harvey Hollins introduces DHHS Director Nick Lyon
10:16 AM – 10:17 AM	Director Nick Lyon brief comments, introduces Dr. Eden Wells
10:17 AM – 10:20 AM	Dr. Eden Wells remarks

10:20 AM – 10:21 AM	Harvey Hollins introduces Senator Jim Ananich
10:21 AM – 10:26 AM	Senator Jim Ananich remarks
10:26 AM – 10:27 AM	Harvey Hollins introduces Ridgway White of Mott Foundation
10:27 AM – 10:32 AM	Ridgway White gives remarks
10:32 AM – 10:42 AM	Q&A from the podium (SW to moderate)
10:42 AM	Event concludes; Governor departs

OPEN Press

High level points:

- Protecting the health and safety of our residents in Flint and across Michigan is always our top priority.
    - All Michigan residents need access to safe, clean water
- That's why today, in consultation with health and water experts in our state agencies, I'm advocating reconnecting the Flint drinking water with the Great Lakes Water Authority.
- I'm recommending to my partners in the Legislature that the state government provide $6 million of the needed $12 million to reconnect with authority.
    - The Flint city government has agreed to cover $2 million of this cost, and the Charles Stewart Mott Foundation is generously offered to donate $4 million.
- What you are seeing here today is a community coming together to work toward solving a problem.
    - I appreciate the assistance of Mayor Walling, and the U.S. Environmental Protection Agency.
    - This is a collaborative approach, and I appreciate that community organizations including the United Way and come forward to assist.

Attachments:

1. Briefing
2. FAQs for Media Q&As
3. Press Release

Briefing.pdf

FAQs for Media Q&As.pdf

Press Release.pdf

Staff/Detail
Venue POC: Kathryn Thomas (mobile?) [redacted]
Security POC: Phil Snyder (mobile) [redacted]
Advance: CLU
Comms: All

Briefing: Flint Water System Press Conference
Thursday, Oct. 8, 2015
Mott Foundation/Commerce Center Building Ground Floor
519 S. Saginaw St., Flint
Communications: Sara Wurfel, [redacted] wurfels@michigan.gov
Dave Murray, [redacted], murrayd1@michigan.gov

Purpose:

We're announcing the decision to reconnect Flint to the Detroit Water and Sewerage Department, a collaborative effort between the state government, Flint city government and the Mott Foundation.

High level points:

- Protecting the health and safety of our residents in Flint and across Michigan is always our top priority.
    - All Michigan residents need access to safe, clean water.

- That's why today, in consultation with health and water experts in our state agencies, I'm advocating reconnecting the Flint drinking water with the Great Lakes Water Authority.

- I'm recommending to my partners in the Legislature that the state government provide $6 million of the needed $12 million to reconnect with authority.
    - The Flint city government has agreed to cover $2 million of this cost, and the Charles Stewart Mott Foundation is generously offered to donate $4 million.

- What you are seeing here today is a community coming together to work toward solving a problem.
    - I appreciate the assistance of Mayor Walling, and the U.S. Environmental Protection Agency.
    - This is a collaborative approach, and I appreciate that community organizations including the United Way and come forward to assist.

Agenda:

9:00 AM - 9:45 AM	Gov meets with Mayor Walling in [Room 1]
9:45 AM – 10:00 AM	Pre-Brief in [Room 2]
10:00 AM – 10:01 AM	Harvey Hollins kicks off press conference; introduces Governor
10:01 AM – 10:05 AM	Governor gives remarks
10:05 AM – 10:06 AM	Harvey Hollins introduces Mayor Dayne Walling
10:06 AM – 10:10 AM	Mayor Walling gives remarks
10:10 AM – 10:11 AM	Harvey Hollins introduces DEQ Director Dan Wyant
10:11 AM – 10:15 AM	Director Wyant gives remarks
10:15 AM – 10:16 AM	Harvey Hollins introduces DHHS Director Nick Lyon
10:16 AM – 10:17 AM	Director Nick Lyon introduces Dr. Eden Wells
10:17 AM – 10:20 AM	Dr. Eden Wells remarks
10:20 AM – 10:21 AM	Harvey Hollins introduces Ridgway White of Mott Foundation
10:21 AM – 10:25 AM	Ridgway White gives remarks
10:25 AM – 10:35 AM	Q&A from the podium
10:35 AM	Event concludes; Governor departs

Attendees: Roughly 20 in audience

Susan	Borrego	Chancellor, U of M Flint
Oscar	Overton	Pastor
Alfred	Harris	Pastor

Latrelle	Holmes	Pastor
Jim	Ananich	Michigan Senate
Sheldon	Neely	Michigan House
Phil	Phelps	Michigan House
Jeff	Wright	Drain Commissioner, Genesee County
Amy	Hovey	Dan Kildee office
Jamie	Gaskin	Dan Kildee office
Tim	Herman	Flint Chamber of Commerce
Brian	Larkin	Flint Chamber of Commerce
Eric	Mays	Flint City Council
Jacqueline	Poplar	Flint City Council
Kerry	Nelson	Flint City Council
Joshua	Freeman	Flint City Council
Wantwaz	Davis	Flint City Council
Herbert	Winfrey	Flint City Council
Monica	Galloway	Flint City Council
Vicki	VanBuren	Flint City Council
Scott	Kincaid	Flint City Council

Speaker comments:

RDS – Collaboration led to solution, outline of solution
Mayor Walling – Importance of solution to Flint
Dan Wyant – School testing results, overview of steps on transition from Flint River to DWSD
Nick Lyon – DHHS involvement
Dr. Eden Wells – Testing of water going forward, use of filters approved by NSF
Ridgway White – Importance of collaboration/commitment to Flint

Talking points:

- Protecting the health and safety of our residents in Flint and across Michigan is always our top priority.
    - All Michigan residents need access to safe, clean water

- That's why today, in consultation with health and water experts in our state agencies, I'm advocating reconnecting the Flint drinking water with the Great Lakes Water Authority.

- I'm recommending to my partners in the Legislature that the state government provide $6 million of the needed $12 million to reconnect with authority.
    - The Flint city government has agreed to cover $2 million of this cost, and the Charles Stewart Mott Foundation is generously offered to donate $4 million.
    - The Michigan Department of Health and Human Services and the Department of Environmental Quality today also is committing an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

- What you are seeing here today is a community coming together to work toward solving a problem.
    - I appreciate the assistance of Mayor Walling, and the U.S. Environmental Protection Agency.
    - This is a collaborative approach, and I appreciate that community organizations including the United Way and come forward to assist.

- Today's announcement in an important step as we move forward together.
    - But it is not our first step, nor will it be our last.

        - This announcement builds on work we've already set in place.
            - That includes $4.2 million in state grants and loan restructuring to help identify and fix infrastructure problems.
            - State agencies have been working closely with Flint leaders and the community for more than a year.

- There will be more to do.
    - Flint has an aging water infrastructure system with challenges that we – together – will continue to address.

- We will continue to test Flint schools for lead levels in drinking water.
    - Schools across the state might also have questions.
    - The Department of Environmental Quality will work with districts across the state to provide testing.
        - Districts can send water samples and paperwork and the nominal charge. (It costs $26 per sample).

- The steps outlined in the comprehensive action plan are still in effect.

FAQs for Media Q&As

Switch to Great Lakes Water Authority

What finally pushed the state to this decision?

This was the City's request, and the Governor supports it, based on several key factors:
In the near term, DWSD water will be easier to manage. It comes from a more stable source than the river, it is fully optimized for corrosion control, and it is clear that residents of Flint have more confidence in this water source.

Will this solve Flint's water crisis?

In combination with the other short term, intermediate term and long-term steps outlined last week, this move represents a big step forward. Flint still has serious system maintenance challenges it must address.

If you're saying residents will still have lead because of their plumbing, does that mean every other city in this state has a lead problem?

Many areas of the state have lead in their infrastructure mix.

Where's the state getting the money to fund this?

We have submitted a formal request to lawmakers via the appropriations process.

Where's the city getting the money to fund this?

The city is contributing all it can, and is getting assistance for its match from the Mott Foundation.

How long will the switch take?

The switch will be completed by the City and Great lakes Water Authority, but our understanding is that it can be accomplished in the very near term once the arrangements are complete.

How long will it take before Detroit's corrosion controls provide protection for Flint?

It will take some time for the corrosion control additives to build on pipe walls throughout the system. Estimates vary. The state can assure we will commence monitoring of the system early 2016 and report results as we get them to keep the community updated.

Why do residents still need to use filters and bottled water?

The filters and bottled water are responsible precautions for any resident concerned about lead exposure.

Do the filters actually work? We've been hearing they don't protect for lead.

Yes, the filters work. They are all certified for lead removal by the National Sanitation Foundation.

The filters are only good for 100 gallons. What happens when they are used up?

They will need to be replaced. And residents can get a new filter.

What about restaurants?

What's going to be done about lead service lines?

Long term, this is the only permanent solution to lead exposure. The state has committed to helping the city accomplish this goal long term.

Do you wish you'd made this switch sooner?
We support the City's decision. We can't look backward. We feel the state has responded quickly and effectively as information has surfaced, been investigated and verified. While the City of Flint is, right now, in compliance with the federal Lead and
Copper Rule, we recognize there is a disparity between surveillance testing and other testing happening in the community that we need to better understand and we are working on developing our knowledge.

Schools testing

What do these results say?
The results say we need to further investigate Flint schools and help the schools find clearer causes for some the results we got.

Any theories about what's going on?
It is possible there are specific points in the plumbing that have lead components which need to be replaced, but we can't say anything definitively until we perform an investigation at each school.

Do the schools have lead service lines? If not, why are they getting such high results?
The schools we tested initially do not have lead service lines. There are a few possible reasons why lead is being detected at specific points in the buildings and not others. When we know things definitively, we will make the information public.

How long do the schools have to stay on bottled water? Just until the switch to Detroit, or longer term?
We are encouraging the schools to continue their current protective measures as a precaution until we can get into the buildings and get more answers.

Why did you only test 13 schools?
That was what the Flint Public Schools requested.

What happens to other schools?
We will test all the schools in Flint if they request it.

What about the schools that can't afford to update their entire plumbing systems?
This is why we are having plumbing assessments completed. There is no way to know yet what each building will require.

How confident are you in your testing? You've got results all over the map.
We are confident that our testing meets the requirements for the federal Lead and Copper Rule, which is surveillance monitoring. The bigger question is whether surveillance monitoring meets the public health protection standards that Lead Exposure Testing methods do. The EPA is working on that question now, and we are engaged in that dialogue.

What do you mean by "health exposure testing"? What are you doing next?

The 90th percentile of your results is still below 15 ppb. Does that make you more or less confident in your testing and in your protocols?

It makes us confident that the testing protocol delivers consistent results. But again, it does raise questions about whether this testing method shows what people think it does or what they really want to know, which is actual lead exposure from lead plumbing in a home.

Any idea how long kids have been exposed to lead? Was it before the move to the Flint River?
That is possible. We don't know.

How does the state bring this new information into the broader picture of kids' lead exposure across the state?

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray Governor's Office: 517-335-6397 Brad Wurfel, 517-284-6713 Department of Environmental Quality Jennifer Eisner, 517-230-9804 Department of Health and Human Services	Thursday, Oct. 8, 2015

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation and city form partnership to fund switch

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation will donate $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous donation, and the dedication of all parties to come together to protect Flint families and children."

The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Flint city leaders requested the state's help to fund the reconnection after a Wednesday meeting of Flint's Technical Advisory Committee. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

INSERT MAYOR QUOTE HERE

The move to Detroit water, which is drawn from Lake Huron, carries many public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can be present in shallower rivers. Additionally, the Great Lakes Water Authority has already fully optimized its corrosion control, using phosphates to help coat the insides of pipes and prevent lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

INSERT MOTT FOUNDATION QUOTE HERE

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure.

Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation. At the Lippincott location only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.

Other good practices for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.

School test results released; more investigation planned

The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.

However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

From: Macaluso, Nora <nmacaluso@bna.com>
Sent: Tuesday, December 29, 2015 2:53 PM
To: Heaton, Anna (GOV)
Cc: Wurfel, Brad (DEQ); Murray, David (GOV)
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Thanks. Apparently I'm not on the right one. I see it on website, though, so don't need it.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Nora Macaluso
Staff Correspondent

Bloomberg BNA

Direct/Mobile 517.775.6340
nmacaluso@bna.com

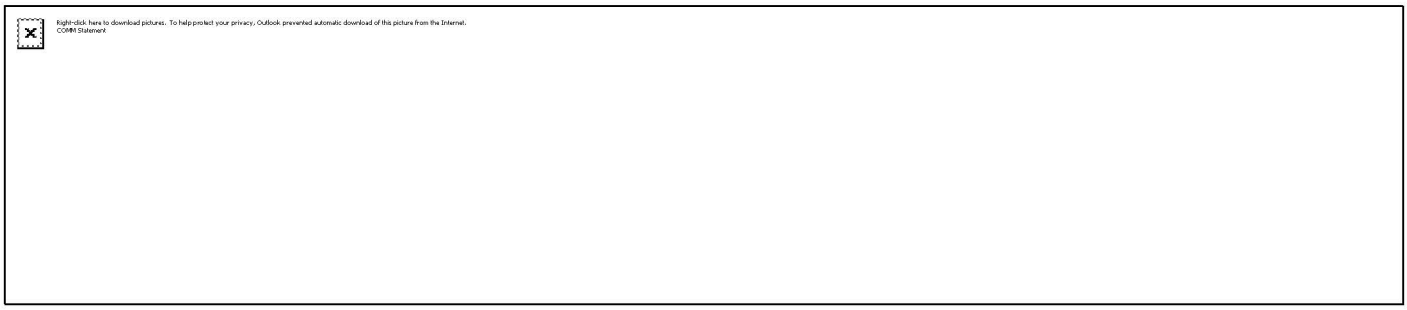
From: Heaton, Anna (GOV) [mailto:HeatonA@michigan.gov]
Sent: Tuesday, December 29, 2015 2:52 PM
To: Macaluso, Nora <nmacaluso@bna.com>
Cc: Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hi Nora,

I'll double check to ensure you're on our distribution list.

Thanks,
Anna

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Heaton, Anna (GOV) <HeatonA@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



Contacts: Dave Murray, Anna Heaton or Laura

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Biehl

517-335-6397

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Changes to take place at DEQ, meeting planned with Mayor Karen Weaver

In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:

"When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

"The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force's final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

"We'll continue to work with the community members to make sure we hear and respond to their concerns.

"In addition, MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to address problems cited by the task force.

"But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term.

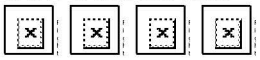
"I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.

“I know many Flint citizens are angry and want more than an apology. That’s why I’m taking the actions today to ensure a culture of openness and trust. We’ve already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we’re going to meet soon to discuss other ways the state can offer assistance.

“These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we’re committed to doing everything we can to protect the well-being of our citizens.”

###

STAY CONNECTED:



This email was sent to heatona@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Heaton, Anna (GOV)
Sent: Tuesday, December 29, 2015 2:52 PM
To: 'nmacaluso@bna.com'
Cc: 'Wurfel, Brad (DEQ)'; Murray, David (GOV)
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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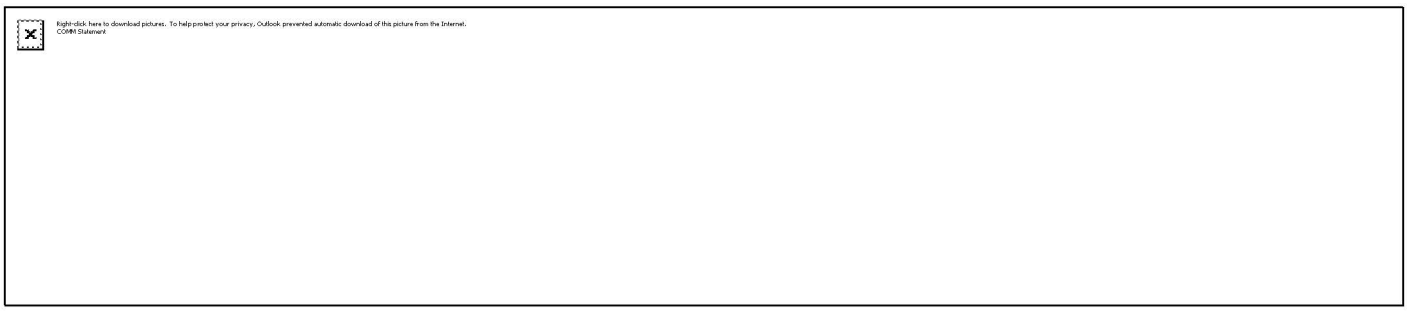

Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

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###

STAY CONNECTED:

This email was sent to heatona@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Scott, Allison (GOV)
Sent: Tuesday, October 06, 2015 8:23 AM
To: Wyant, Dan (DEQ); Emmitt, Beth (GOV)
Cc: Agen, Jarrod (GOV)
Subject: Fwd: Flint Water updates

See below - DAN can your team assist with daily updates to GOV for his nightly briefing so he is not up to date. Your team would be responsible for collecting info from other depts involved etc

Let me know if you have questions or concerns

Thanks

Thanks

Sent from my iPhone

Begin forwarded message:

> **From:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>
> **Date:** October 6, 2015 at 8:20:24 AM EDT
> **To:** "Scott, Allison (GOV)" <scotta12@michigan.gov>
> **Cc:** "Clement, Elizabeth (GOV)" <clemente@michigan.gov>, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
> **Subject: Re: Flint Water updates**
>
> Update from Dan in briefing. Comms to also send update for briefing on stories or announcements upcoming. But Dan will have most accurate testing and analysis details to report.

On Oct 6, 2015, at 8:14 AM, Scott, Allison (GOV) <scotta12@michigan.gov> wrote:

> What is most effective accurate rout? Dan provided update for briefing each day or does Comms shop speak to DEQ Comms and provide?
>
> Sent from my iPhone
>
> On Oct 6, 2015, at 8:05 AM, Snyder, Rick (GOV) <[redacted]> wrote:
>
> We need a better update system re Flint Water.

I saw in the press this am that DHHS announced yesterday that water filters would start being given out today. This should have come internally with more detail. I had press questions last night.

Overall, we should have a daily report on Flint until our recommendations are fully implemented.

For example:

1. What are the water test results from the public schools?

2. How many free test have been requested? How many have been done? How many remain and how long have they been waiting? What are the results - no lead, lead consistent with history, higher levels?

3. How many filters have been distributed? How many unfulfilled requests?

4. New blood test results? Especially in the two zip codes.

5. Analysis of tech advisory group

6. Analysis of the GLWA vs. Flint River vs. KWA.

Thanks

Rick

Sent from my iPad

From: Emmitt, Beth (GOV)
Sent: Thursday, September 24, 2015 9:26 PM
To: Dickinson, Jordan
Cc: Rospond, Laurie (GOV); Mcbride, Bill (GOV); Murray, David (GOV)
Subject: Re: Request for Phone Call with Congressman Kildee
Attachments: image001.gif

Hi Jordan,
The Governor is going to be traveling most of the day tomorrow, but we work to see if we can find a good time cell-wise and get back with you in the morning.
Thanks,
Beth

On Sep 24, 2015, at 7:05 PM, Dickinson, Jordan <Jordan.Dickinson@mail.house.gov> wrote:

> Hi Beth and Laurie,
>
> My boss would like to set up a phone call with Governor Snyder regarding the lead in the water in Flint. He would like to do it tomorrow if possible due to the immediacy of the problem. Please let me know if we can get something scheduled for tomorrow.
>
> Thank you,
>
> **Jordan Dickinson**
> Legislative Assistant
> Congressman Dan Kildee (MI-05)
> 227 Cannon House Office Building
> Washington, D.C. 20515
> Phone: (202) 225-3611
> www.dankildee.house.gov
> <image002.gif> <image003.jpg> <image004.png>
>
> Sign up for Congressman Dan Kildee's e-newsletter

From: Emmitt, Beth (GOV)
Sent: Friday, September 25, 2015 4:04 PM
To: Scott, Allison (GOV)
Cc: Bedan, Morgan (GOV)
Subject: Re: Flint water

Does the Wyant/Ananich have to happen before Kildee too?

> On Sep 25, 2015, at 3:44 PM, Scott, Allison (GOV) <scotta12@michigan.gov> wrote:
>
> governor spoke with Ananich this afternoon
>
> He would like to do a call Monday morning with Dennis and Dan Wyant to get latest and greatest info on this topic
>
> After that will be some combination of he and Wyant speaking with Ananich
>
> Any materials on this topic please share for over the weekend
>
> Beth please use call time mom for this purpose. This should precede the Kildee call as well
>
> Thanks
>
> Sent from my iPhone

From: Emmitt, Beth (GOV)
Sent: Friday, September 25, 2015 4:09 PM
To: Scott, Allison (GOV)
Cc: Bedan, Morgan (GOV)
Subject: Re: Flint water

Good. Thanks working on the Dan/Dennis call now. Kildee is confirmed for 11:30 am Monday. Trying to get Dennis and Dan around 8:30 am.

> On Sep 25, 2015, at 4:07 PM, Scott, Allison (GOV) <scotta12@michigan.gov> wrote:
>
> Not necessarily that may even happen without gov.....
>
> -----Original Message-----
> From: Emmitt, Beth (GOV)
> Sent: Friday, September 25, 2015 4:04 PM
> To: Scott, Allison (GOV) <scotta12@michigan.gov>
> Cc: Bedan, Morgan (GOV) <BedanM@michigan.gov>
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>>
>> Thanks
>>
>> Sent from my iPhone

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:07 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: 11:30 am call TODAY

Importance: High

The Governor has a call scheduled today with Congressman Kildee at 11:30 am re: Flint water. I now need Dan and Nick to participate as well. Can you please confirm that the will be available and I'll forward the appointment.
Thanks,
Beth

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:10 AM
To: Grijalva, Nancy (DCH)
Subject: RE: 11:30 am call TODAY

Yes, I have to reach out to his office next.

From: Grijalva, Nancy (DCH)
Sent: Monday, September 28, 2015 10:10 AM
To: Emmitt, Beth (GOV) <emmittb@michigan.gov>
Subject: RE: 11:30 am call TODAY

Nick can step out of his meeting to participate.. Are you also scheduling one with Senator Ananich?

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:07 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: 11:30 am call TODAY
Importance: High

The Governor has a call scheduled today with Congressman Kildee at 11:30 am re: Flint water. I now need Dan and Nick to participate as well. Can you please confirm that the will be available and I'll forward the appointment.
Thanks,
Beth

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:17 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: RE: 11:30 am call TODAY

What about 12:00 pm for another call with Sen. Ananich?

From: Thelen, Mary Beth (DEQ)
Sent: Monday, September 28, 2015 10:09 AM
To: Emmitt, Beth (GOV) <emmittb@michigan.gov>; Grijalva, Nancy (DCH) <GrijalvaN@michigan.gov>
Subject: RE: 11:30 am call TODAY
Importance: High

Yes, Dan Wyant is available. I can make Dan Wyant available anytime today.

Thanks Beth (and thanks for the appt and call in number).

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:07 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: 11:30 am call TODAY
Importance: High

The Governor has a call scheduled today with Congressman Kildee at 11:30 am re: Flint water. I now need Dan and Nick to participate as well. Can you please confirm that the will be available and I'll forward the appointment.
Thanks,
Beth

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 11:41 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: RE: 11:30 am call TODAY

Yes – just sent the appointment

From: Thelen, Mary Beth (DEQ)
Sent: Monday, September 28, 2015 11:16 AM
To: Emmitt, Beth (GOV) <emmittb@michigan.gov>; Grijalva, Nancy (DCH) <GrijalvaN@michigan.gov>
Subject: RE: 11:30 am call TODAY

Has the Senator been confirmed for 12:00? Thanks.

Mary Beth

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:17 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: RE: 11:30 am call TODAY

What about 12:00 pm for another call with Sen. Ananich?

From: Thelen, Mary Beth (DEQ)
Sent: Monday, September 28, 2015 10:09 AM
To: Emmitt, Beth (GOV) <emmittb@michigan.gov>; Grijalva, Nancy (DCH) <GrijalvaN@michigan.gov>
Subject: RE: 11:30 am call TODAY
Importance: High

Yes, Dan Wyant is available. I can make Dan Wyant available anytime today.

Thanks Beth (and thanks for the appt and call in number).

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Emmitt, Beth (GOV)
Sent: Monday, September 28, 2015 10:07 AM
To: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH)
Subject: 11:30 am call TODAY
Importance: High

The Governor has a call scheduled today with Congressman Kildee at 11:30 am re: Flint water. I now need Dan and Nick to participate as well. Can you please confirm that the will be available and I'll forward the appointment.
Thanks,
Beth

From: Emmitt, Beth (GOV)
Sent: Tuesday, September 29, 2015 10:55 AM
To: Clayton, Stacie (GOV)
Subject: FW: flint meeting

From: Scott, Allison (GOV)
Sent: Tuesday, September 29, 2015 10:54 AM
To: Emmitt, Beth (GOV) <emmittb@michigan.gov>
Subject: RE: flint meeting

No - phone

From: Emmitt, Beth (GOV)
Sent: Tuesday, September 29, 2015 10:53 AM
To: Scott, Allison (GOV) <scotta12@michigan.gov>
Subject: RE: flint meeting

Does Harvey need to be here in person

Subject:	RDS/DM/BM/NL/DW - Call to Congressman Dan Kildee
Location:	By Phone
Start:	Mon 9/28/2015 11:30 AM
End:	Mon 9/28/2015 12:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	GovCalendar
Required Attendees:	Mcbride, Bill (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Lyon, Nick (DCH); Grijalva, Nancy (DCH); Muchmore, Dennis (GOV); Wisniewski, Wendy (GOV)

Purpose: Request from Kildee to talk about the lead in the water in Flint

Participants:

- Congressman Kildee
- Jen Cox, Chief of Staff
- Troy Nienberg, Legislative Director
- Jordan Dickinson, Legislative Assistant

[redacted]

[redacted]

Host: [redacted]– DM to dial in as host

POC: Jordan Dickinson – [redacted]1 jordan.dickinson@mail.house.gov or Brunner, Nathan Nathan.Brunner@mail.house.gov

Subject: RDS/DM/BM/NL/DW - Conference call with Senator Ananich
Location: By Phone [redacted]

Start: Mon 9/28/2015 11:00 AM
End: Mon 9/28/2015 11:30 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: GovCalendar
Required Attendees: Thelen, Mary Beth (DEQ); Mcbride, Bill (GOV); Muchmore, Dennis (GOV); Lyon, Nick (DCH); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH); Wyant, Dan (DEQ)

Purpose: Flint water

Senator Ananich and COS Andy Leavitt

RDS to call: [redacted]

Different # than the 11:30 am Call

[redacted]

ACCESS CODE: [redacted]
HOST PASSWORD: [redacted] – DM to dial in as host

POC: Michelle Carnevale MCarnevale@senate.michigan.gov

From:	DEQ-Legislative-Contact
Sent:	Wednesday, September 16, 2015 5:06 PM
To:	Jordan.Dickinson@mail.house.gov
Cc:	Ananich, Senator Jim ; Neeley, Rep Sheldon; Phelps, Rep Phil; dwalling@cityofflint.com; hcroft@cityofflint.com; hedman.susan@epa.gov; poy.thomas@epa.gov; Schock.michael@epa.gov; Lytle.darren@epa.gov; fortin.denise@epa.gov; Edwardsm@vt.edu; Hollins, Harvey (GOV); Mcbride, Bill (GOV); Brown, Eric (GOV); Thelen, Mary Beth (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ); Anderson, Madhu (DEQ); Copen, Leigh (DEQ); Pallone, Maggie (DEQ); Howes, Sarah (DEQ); Wurfel, Brad (DEQ); Shekter Smith, Liane (DEQ); Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Cook, Pat (DEQ)
Subject:	MDEQ Response to Congressman Kildee Letter re: Flint Drinking Water
Attachments:	Congressman Kildee Response re Flint Water.pdf

Attached please find the MDEQ's response to your September 9, 2015 letter regarding Flint drinking water.

Thank you,
Heather Feuerstein
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 16, 2015

VIA E-MAIL

The Honorable Daniel Kildee
United States House of Representatives
Washington, DC 20515

Dear Congressman Kildee:

Thank you for your September 9, 2015, letter regarding your concerns for the drinking water in the city of Flint (Flint). The Michigan Department of Environmental Quality (MDEQ) is working closely with Flint's water department as well as the U.S. Environmental Protection Agency (USEPA) to ensure Flint residents have ample water that meets state and federal drinking water standards.

The MDEQ's role is to administer its nearly 40-year-old state drinking water protection program based on federal guidelines. The MDEQ works with approximately 11,500 public water systems in the state to monitor for more than 90 primary drinking water contaminants and ensure that every supply consistently provides safe drinking water.

In Flint, the city made a decision 18 months ago to switch drinking water sources. This change required them to take specific measures under the federal Lead and Copper Rule, which was enacted in 1991 to monitor water as it interacts with lead service connections and home plumbing. Flint's test results were conducted according to the same testing protocols every Michigan community uses and the same protocols Flint has used to test its water every three years for the past 25 years.

While the results from Flint's testing show compliance with the federal action level for lead and copper, on August 17, 2015, the MDEQ instructed the city to move forward expeditiously with developing additional corrosion control treatment to minimize the corrosive effects between drinking water and lead service connections and home plumbing in the Flint service area.

We appreciate and share your concern for the situation, and the MDEQ looks forward to providing you a detailed briefing next week. If you have any additional questions in the meantime, please contact Ms. Maggie Pallone, Deputy Director, Policy and Legislative Affairs, at 517-284-6704 or pallonem@michigan.gov; or you may contact me.

Sincerely,

Dan Wyant

Dan Wyant
Director
517-284-6700

cc: Senator Jim Ananich
Representative Sheldon Neeley
Representative Phil Phelps
Mayor Dayne Walling, City of Flint
Mr. Howard Croft, City of Flint
Dr. Susan Hedman, Regional Administrator, USEPA, Region 5
Mr. Thomas Poy, USEPA, Region 5
Ms. Denise Fortin, USEPA, Region 5
Mr. Michael Schock, USEPA
Mr. Darren Lytle, USEPA
Mr. Marc Edwards, Virginia Tech
Mr. Harvey Hollins, Governor's Southeast Michigan Office
Mr. Bill McBride, Governor's Washington Office
Mr. Eric Brown, Governor's Washington Office
Mr. Jim Sygo, Chief Deputy Director, MDEQ
Ms. Madhu R. Anderson, Deputy Director, MDEQ
Ms. Maggie Pallone, Deputy Director, MDEQ
Ms. Sarah M. Howes, Legislative Liaison, MDEQ
Mr. Brad Wurfel, Communications Director, MDEQ
Ms. Liane Shekter Smith, MDEQ
Mr. Stephen Busch, MDEQ
Mr. Pat Cook, MDEQ

From: Muchmore, Dennis (GOV)
Sent: Monday, September 28, 2015 12:05 PM
To: Mcbride, Bill (GOV); Hollins, Harvey (GOV); Agen, Jarrod (GOV); Wurfel, Sara (GOV); Lyon, Nick (DCH); Wyant, Dan (DEQ)
Subject: FW: Letter to Governor Snyder: Flint Water
Attachments: 09.28.2015-Letter-Ananich-Snyder-Water-Requests.pdf

Just came in

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Monday, September 28, 2015 11:45 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Letter to Governor Snyder: Flint Water

Hi Dennis,

Senator Ananich began drafting the attached letter on Sunday and thought it would be helpful to guide our 12pm call.

Thanks,

Andy

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

September 28, 2015

State of Michigan
Executive Office of the Governor
P.O. Box 30013
Lansing, MI 48909

Governor Snyder,

Access to safe, affordable drinking water is a basic necessity for every community. It is completely unacceptable that respected scientific experts and our trusted local physicians have verified that the City of Flint's drinking water is dangerous for our citizens, especially our most vulnerable young people.

As a result, I am formally requesting assistance as suggested by the experts on the frontline of this public health crisis. Here are the top priorities we should work together to address:

1. **Swift transfer to a safe source of water until the Karegnondi Water Authority (KWA) project is complete next year.** Your administration has the ability to ensure a financially acceptable and responsible contract between Flint and the Detroit Water and Sewerage Department, particularly in light of the public health implications with the Flint River supply.

2. **Equally urgent is the need for corrosion control as recommended by independent scientific experts.** There are chemical treatment additives that could help reduce this corrosion. I urge you to help the city implement anti-corrosion methods immediately. The current emergency makes the January timeline unacceptable.

3. **Filters and bottled water assistance.** Flint water touches the entire city. Whether it's a person's home, work, school, restaurant or place of worship, access to safe, clean drinking water should not be hindered. Water filters, used in conjunction with corrosion control methods, are necessary to help guard against toxic exposure.

   I have been working with the philanthropic community and private sector to secure donations to acquire filters and water; however, more funds will be necessary to effectively cover the thousands of residents impacted. I would like to formally request emergency funding to help supplement the acquisition of water filters and bottled water. Any and all appropriate state or federal money to help accomplish this feat should be considered.

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

4. **Support for completion of the KWA pipeline.** It is presumed that the upcoming KWA pipeline will solve a number of problems associated with the current sourcing of Flint's water from the Flint River. I am requesting a meeting between representatives from your office, KWA board members and project engineers to discuss any options to expedite the pipeline's construction.

5. **A long-term commitment to addressing outdated infrastructure.** A recent EPA report just outlined the billions of dollars necessary over the next several decades to adequately secure safe water for our entire state. You have the position and opportunity to be a national leader on moving the debate forward on this topic so that we can avoid the type of catastrophe my community is grappling with today.

I look forward to working with you to deliver on these concrete and urgent action items to alleviate the public health crisis facing our residents.

We jeopardize any progress and comeback for our cities and state if we cannot ensure safe, basic necessities for our families or if we cannot come together swiftly to fix an identified, severe threat to the safety of our people.

Sincerely,

Jim Ananich
Senate Democratic Leader
District 27

cc:
U.S. Representative Dan Kildee
Mayor Dayne Walling, City of Flint
Howard Croft, City of Flint
Susan Hedman, EPA
Thomas Poy, EPA
Michael Schock, EPA-ORD
Darren Lytle, EPA-ORD
Denise Fortin, EPA
Liane Shekter-Smith, MDEQ
Pat Cook, MDEQ
Stephen Busch, MDEQ
Brad Wurfel, MDEQ
Marc Edwards, Virginia Tech

From: Upton, Fred <[redacted]>
Sent: Tuesday, December 29, 2015 4:33 PM
To: Mcbride, Bill (GOV)
Subject: Re: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Yep. Not good

Sent from my iPhone

> On Dec 29, 2015, at 1:44 PM, Mcbride, Bill (GOV) <mcbrideb@michigan.gov> wrote:
>
> This one hurts
>
>
> [COMM Statement]
>
> Contacts: Dave Murray<mailto:murrayd1@michigan.gov>, Anna Heaton<mailto:heatona@michigan.gov> or Laura Biehl<mailto:biehll@michigan.gov>
>
> 517-335-6397
>
>
> FOR IMMEDIATE RELEASE
> Tuesday, Dec. 29, 2015
>
>
> Gov. Rick Snyder takes action on initial findings from Flint Water Task Force<http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTUxMjI5LjUzMjQ5MzIxJm1lc3NhZ2VpZD1NREltUFJELUJVTC0yMDE1MTIyOS41Mzl0OTMyMSZkYXRhYmFzZWIkPTEwMDEmc2VyaWFsPTE2OTc2MDU5JmVtYWlsaWQ9bWNicmlkZWJAbWljaGlnYW4uZ292JnVzZXJpZD1tY2JyaWRlYkBtaWNoaWdhbi5nb3YmZmw9JmV4dHJhPU11bHRpdmFyaWF0ZUIkPSYmJg==&&&100&&&http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-372335--,00.html>
>
> Changes to take place at DEQ, meeting planned with Mayor Karen Weaver
>
> In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:
>
> “When I became aware that the city of Flint’s water showed elevated lead levels and that the state’s handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.
>
> “The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force’s final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.
>
> “We’ll continue to work with the community members to make sure we hear and respond to their concerns.

>
> “In addition, MDEQ Director Dan Wyant has offered his resignation, and I’ve determined that it’s appropriate to accept it. I’m also making other personnel changes at MDEQ to address problems cited by the task force.
>
> “But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let’s share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we’re using the very best testing protocols to ensure Flint residents have safe drinking water and that we’re taking steps to protect their health over the short and long term.
>
> “I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.
>
> “I know many Flint citizens are angry and want more than an apology. That’s why I’m taking the actions today to ensure a culture of openness and trust. We’ve already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we’re going to meet soon to discuss other ways the state can offer assistance.
>
> “These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we’re committed to doing everything we can to protect the well-being of our citizens.”
>
> # # #
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>
>
> STAY CONNECTED:
> [Visit us on Facebook]<http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTUxMjI5LjUzMjQ5MzIxJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE1MTIyOS41MzI0OTMyMSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE2OTc2MDU5JmVtYWlsaWQ9bWNicmlkZWJAbWljaGlnYW4uZ292JnVzZXJpZD1tY2JyaWRlYkBtaWNoaWdhbi5nb3YmZmw9JmV4dHJhPU11bHRpdmFyaWF0ZUlkPSYmJg==&&&101&&&http://www.facebook.com/GovernorRickSnyder> [Visit us on Twitter]
<http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTUxMjI5LjUzMjQ5MzIxJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE1MTIyOS41MzI0OTMyMSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE2OTc2MDU5JmVtYWlsaWQ9bWNicmlkZWJAbWljaGlnYW4uZ292JnVzZXJpZD1tY2JyaWRlYkBtaWNoaWdhbi5nb3YmZmw9JmV4dHJhPU11bHRpdmFyaWF0ZUlkPSYmJg==&&&102&&&http://twitter.com/onetoughnerd> [Visit us on YouTube]
<http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTUxMjI5LjUzMjQ5MzIxJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE1MTIyOS41MzI0OTMyMSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE2OTc2MDU5JmVtYWlsaWQ9bWNicmlkZWJAbWljaGlnYW4uZ292JnVzZXJpZD1tY2JyaWRlYkBtaWNoaWdhbi5nb3YmZmw9JmV4dHJhPU11bHRpdmFyaWF0ZUlkPSYmJg==&&&103&&&http://www.youtube.com/govsnyder> [Sign up for email updates]
<http://links.govdelivery.com:80/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTUxMjI5LjUzMjQ5MzIxJm1lc3NhZ2VpZD1NREItUFJELUJVTC0yMDE1MTIyOS41MzI0OTMyMSZkYXRhYmFzZWlkPTEwMDEmc2VyaWFsPTE2OTc2MDU5JmVtYWlsaWQ9bWNicmlkZWJAbWljaGlnYW4uZ292JnVzZXJpZD1tY2JyaWRlYkBtaWNoaWdhbi5nb3YmZmw9JmV4dHJhPU11bHRpdmFyaWF0ZUlkPSYmJg==&&&104&&&https://public.govdelivery.com/accounts/MIGOV/subscriber/new>
> _____
> This email was sent to mcbrideb@michigan.gov<mailto:mcbrideb@michigan.gov> on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858
>

From: Mcbride, Bill (GOV)
Sent: Tuesday, December 29, 2015 3:44 PM
To: [redacted]
Subject: Fwd: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

This one hurts

Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Changes to take place at DEQ, meeting planned with Mayor Karen Weaver

In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:

"When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

"The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force's final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to

restore trust in how the state keeps its citizens safe and informed.

“We’ll continue to work with the community members to make sure we hear and respond to their concerns.

“In addition, MDEQ Director Dan Wyant has offered his resignation, and I’ve determined that it’s appropriate to accept it. I’m also making other personnel changes at MDEQ to address problems cited by the task force.

“But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let’s share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we’re using the very best testing protocols to ensure Flint residents have safe drinking water and that we’re taking steps to protect their health over the short and long term.

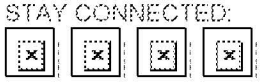
“I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.

“I know many Flint citizens are angry and want more than an apology. That’s why I’m taking the actions today to ensure a culture of openness and trust. We’ve already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we’re going to meet soon to discuss other ways the state can offer assistance.

“These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we’re committed to doing everything we can to protect the well-being of our citizens.”

###

STAY CONNECTED:



This email was sent to mcbrideb@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Wurfel, Brad (DEQ)
Sent: Wednesday, December 10, 2014 5:24 PM
To: Silfven, Ken (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Draft Violation Notice for comment
Attachments: Flint DBP MCL 4Q14 draft.doc

City of Flint. Drinking water violation. Seems the extensive treatment they've had to use on the Flint River water is having its own set of side effects.
Last month I learned they have retained Kelly Rossman to help them deal with the messaging around this problem. Nobody on City of Flint's team will be surprised to get this letter. We'll work with them to figure out good partner messaging. Just wanted y'all in the loop.
Welcome to the loop.
b

From: Busch, Stephen (DEQ)
Sent: Wednesday, December 10, 2014 5:11 PM
To: Wurfel, Brad (DEQ); Datema, Maggie (DEQ); Shekter Smith, Liane (DEQ)
Cc: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: Draft Violation Notice for comment

Attached is a draft violation notice to the City of Flint regarding the exceedance of the drinking water standard for total trihalomethanes (TTHM).

If you have any comments please let me know by Friday, we would like to mail this out by Monday at the latest. An electronic copy of the signed letter will be provided to Maggie for forwarding to legislative members in the Flint area.

If you have any questions, please contact me directly.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 12, 2014

Mr. Brent Wright, Operation Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, MI 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice – Maximum Contaminant Level for Total Trihalomethanes
Operational Evaluation – Total Trihalomethanes
3rd Quarter 2014

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610*, Maximum contaminant levels* (MCL) *for disinfection byproducts*, of the 1979 Administrative Code.

In accordance with R.325.10610, *MCLs for disinfection byproducts*, of the 1979 Administrative Code, the MCL for disinfection byproduct total trihalomethanes (TTHM) is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City of Flint's highest TTHM locational running annual average (LRAA), based on the last three quarters ending November 30, 2014, is 0.099 mg/l which exceeds the standard, and that two of the eight sample site locations exceed the standard of 0.080 mg/L.

Further, in accordance with R325.10719l, Disinfection byproducts: operational evaluation levels, of the 1979 Administrative Code, when an operational evaluation level (OEL) at a monitoring location for TTHM exceeds 0.080 mg/L, a supply shall conduct an operational evaluation and submit a written report of the evaluation to the department not later than 90 days after being notified of the analytical result that causes the supply to exceed the operational evaluation level. As listed in the table below, our records show that TTHM operational evaluation levels for the City of Flint exceed 0.080 mg/L, at four of the City's eight sample site locations.

TTHM Results (mg/L)					
	5/21/14	8/21/14	11/20/14	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**	**0.106**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068	0.076
DBP3 North Flint Auto	**0.097**	**0.118**	0.041	0.064	0.074

6204 N. Saginaw St.					
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	**0.099**	**0.122**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.074	**0.082**
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072	**0.085**
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061	0.074
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056	0.065

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on December 1, 2014, and will continue until TTHM LRAA is below the MCL at all sample sites.

Water systems who exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 7191(R325.10719l) within 90 days since the start of the violation. The Operational Evaluation must identify possible causes and corrective measures for the elevated TTHM levels. The Operational Evaluation must be completed and received by our office by no later than March 1, 2015.

If you have any factual information you would like us to consider regarding the violation identified in this Notice, please provide them in a written response by January 12, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice as soon as practical but no later than thirty (30) days after the supplier learns of the violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample public notice (PN) which contains the minimum required language. The City is encouraged to provide additional information regarding its response to this violation. **Please notify your consumers by January 10, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice**. This violation must be included in your Consumer Confidence Report (CCR,) due by July 1, 2015. The public notification must be repeated every quarter until you no longer exceed the TTHM standard. **Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.** Contact our office for a more complete summary of our fines policies.

We anticipate and appreciate your cooperation in resolving this matter. If you have any questions regarding this Violation Notice, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water & Municipal

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water & Municipal

Assistance
517-290-8817

Assistance
517-284-6644

MFP:AR:JR

Enclosure

cc:
Genesee County Health Dept.
Jennifer Crooks, EPA Region 5
Mr. Darnell Early, Emergency Manager, City of Flint
Daughtry Johnson
Howard Croft
Rovert Bincsik
Liane Shekter Smith, P.E.
Richard Benzie, P.E.
Stephen Busch, P.E.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 µg/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.

- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem by 2015.

For more information, please contact Mr. Brent Wright at 517-787-6537 or the Flint Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Silfven, Ken (GOV)
Sent: Wednesday, December 10, 2014 5:46 PM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: RE: Draft Violation Notice for comment

Thx B

From: Wurfel, Brad (DEQ)
Sent: Wednesday, December 10, 2014 5:24 PM
To: Silfven, Ken (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Draft Violation Notice for comment

City of Flint. Drinking water violation. Seems the extensive treatment they've had to use on the Flint River water is having its own set of side effects.
Last month I learned they have retained Kelly Rossman to help them deal with the messaging around this problem. Nobody on City of Flint's team will be surprised to get this letter. We'll work with them to figure out good partner messaging. Just wanted y'all in the loop.
Welcome to the loop.
b

From: Busch, Stephen (DEQ)
Sent: Wednesday, December 10, 2014 5:11 PM
To: Wurfel, Brad (DEQ); Datema, Maggie (DEQ); Shekter Smith, Liane (DEQ)
Cc: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: Draft Violation Notice for comment

Attached is a draft violation notice to the City of Flint regarding the exceedance of the drinking water standard for total trihalomethanes (TTHM).

If you have any comments please let me know by Friday, we would like to mail this out by Monday at the latest. An electronic copy of the signed letter will be provided to Maggie for forwarding to legislative members in the Flint area.

If you have any questions, please contact me directly.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 11:14 AM
To: Silfven, Ken (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: RE: Flint Public Meeting Carpool

Not to overdo it, but FYI I just talked with Stanton to brief him and offer a phone call between the new EM and Wyant today, just so the guy has his feet under him tonight.
b

From: Silfven, Ken (GOV)
Sent: Wednesday, January 21, 2015 10:42 AM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: RE: Flint Public Meeting Carpool

Thanks B.
Sara/Dave -- please note reference to city's letter to gov as well tonight's meeting, in case the MLive folks, etc. come your way.
Ken

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 10:19 AM
To: Silfven, Ken (GOV)
Subject: FW: Flint Public Meeting Carpool
Importance: High

See below. There's a public meeting in the city of Flint tonight regarding the ongoing challenges with their drinking water system. The public has concerns -- some the result of the city's poor communication efforts, some (I suspect) the result of folks who stir the public fear pot for political leverage. But the City apparently sent a letter to the Governor today. I have not seen it, but wanted to put a flare in the air. See below.
b

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 9:48 AM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ)
Subject: RE: Flint Public Meeting Carpool

Brad,

Mike and I are available most of the day. I have a conference call 11-12 and an offsite meeting 2:30-4:30. Just come down to the first floor whenever you have time.

The issue has further escalated this morning with a letter from the Flint Mayor to the Governor requesting additional assistance.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance

MDEQ
517-643-2314

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 9:45 AM
To: Busch, Stephen (DEQ)
Subject: RE: Flint Public Meeting Carpool

Steve, thanks and my apologies for missing our confab yesterday afternoon. SOS stuff made for a crazy day.
Not sure I'm going to make it to Flint tonight, but wanted to spend a few minutes today if you've got time.
Bluntly, I have tremendous confidence in you and Mike to handle yourselves admirably with the public and press.
My only concern is that the City has communicated so poorly that we could end up in position to serve as their defacto spokespeople.
Let me know if you've got a few today.
b

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 20, 2015 3:45 PM
To: Wurfel, Brad (DEQ)
Subject: Flint Public Meeting Carpool

Brad,

Mike and I were planning to carpool up to Flint tomorrow night. Did you want to carpool as well? Just let us know. Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Stanton, Terry A. (Treasury)
Sent: Thursday, January 22, 2015 5:43 PM
To: Murray, David (GOV)
Subject: Flint
Attachments: Flint Water TPs.docx

Importance: High

Dave…

Please see the attached, which includes the info I shared yesterday. I have asked Brad at DEQ if he has anything more, as they have had more involvement on the water issue. I will forward anything he sends me. I believe there is a meeting next week with the G to discuss this issue, though clearly he may face media questions well before that occurs.

We suggest the G say the ***residents deserve clean, safe water and EM Jerry Ambrose, his management team and the DEQ are working to ensure that…and that the State will be a resource where and when possible (as we have with other issues, ie, crime).***

I cannot speak to other "requests" in the Mayor's letter (dated 1-18), which seek waivers, Federal and State funding, etc.

As you will see in the document, the city is committed to addressing the issue and in fact, has taken numerous steps (with guidance and/or approval from DEQ) to date.

Hope this helps.

Talking Points:

The City, in conjunction with the Dept. of Environmental Quality, is working diligently…every day…to ensure Flint residents have access to clean, safe water. To that end, the City has issued an RFP soliciting expert assistance to assure the City is doing everything it needs to be doing.

The city continues to work closely with staff from the Department of Environmental Quality (DEQ) to ensure water meets safety guidelines, that water operations are managed properly, and all regulations are met.

The city is committed to addressing the issue and continues to pursue its strategy.

Background:

On December 16, 2014, the City of Flint received a violation notice from the Michigan Department of Environmental Quality (DEQ), stating the City water samples were in violation of Maximum Contaminant Levels (MCL), a violation of the Safe Drinking Water Act (PA 399 of 1976).

The DEQ considers the violation period to have begun December 1, 2014. The violation was triggered when water sample reports showed that the City's water quality, on average, exceed the total allowable level of *Disinfection Byproducts* during the first three quarters of 2014. Further, four of the City's eight water sample site locations individually exceeded allowable MCL levels during the same period of 2014.

These conditions are considered a Tier 2 violation and, as a result, the City was required to notify the public of these contamination levels by January 10, 2015 (which was done) and continue to notify them every three months until the violation is resolved.

The City outlined some potential remedies to the problem in its initial Operational Evaluation Report, dated November 26, 2014. These potential remedies are intended to be implemented in stages. Stage 1 consists of actions that can be implemented without any new construction within the distribution system and are due to be implemented by early March 2015.

- Troubleshooting of the ozone system.
- Implementation of different testing methods.
- Operational changes at the Water Treatment Plant.
- Increase water main flushing efforts to minimize stagnant water.
- Identify areas with high water age and implement preemptive measures.

The City will be providing additional potential solutions when it updates the Operational Evaluation Report, which must be submitted to the DEQ by March 1, 2015.

To date, the City has taken the following actions:

As an integral part of the transition to the Flint River on a temporary basis, the MDEQ was consulted about the City's plans, and ultimately issued necessary permits to proceed. The City also engaged the services of the LAN engineering firm to guide the city in installing the necessary equipment to treat the water on an ongoing basis. This resulted in the development of a comprehensive drinking water plan.

The City monitors its water quality on a daily basis to assure that water quality remains within established guidelines. With the variances in water temperature and the leakage and infiltration problems arising as the result of failure of parts of the distribution system, water quality did exceed, for a time, some of the established guidelines. This resulted in the issuance of the recent notices to the public.

Efforts taken to address non-compliance included increasing water flow through valve replacements and hydrant flushing and optimizing treatment processes.

The City has committed to increasing communication with the public in order to inform water users factually of the issues which have arisen, to alleviate unnecessary concern and to identify steps being taken to address the issues. This is being implemented through detailed educational materials being made available both online and at City Hall, as well as through public informational meetings. Additionally, a full Water System Questions and Answers document is available online.

Additional information:

State and city officials have said exposure to TTHM is a long-term concern for some if they drink water with elevated TTHM for several decades.

Notices indicated that Flint water is safe to drink but warns those with a "severely compromised immune systems or who are elderly" may be at increased risk and should seek advice about drinking water from your health care provider.

The city and county are partners in the Karegnondi Water Authority, which is building a pipeline to Lake Huron to bring lake water here for use by the end of 2016.

Returning to DWSD would add approximately $1 million (monthly) to the City expenses.

From: Brown, Jessica (GOV)
Sent: Tuesday, January 27, 2015 1:16 PM
To: Stanton, Terry A. (Treasury); Wurfel, Brad (DEQ); Feuerstein, Heather (DEQ)
Cc: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: RE: Flint Water Call

Importance: High

Let's plan on 1:30 – Thanks a bunch Terry and Heather. Conference line below:

[redacted]

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, January 27, 2015 12:52 PM
To: Brown, Jessica (GOV); Wurfel, Brad (DEQ)
Subject: RE: Flint Water Call

Works here.

From: Brown, Jessica (GOV)
Sent: Tuesday, January 27, 2015 12:50 PM
To: Stanton, Terry A. (Treasury); Wurfel, Brad (DEQ)
Subject: RE: Flint Water Call

Any chance you can both do 1:30?

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, January 27, 2015 12:22 PM
To: Brown, Jessica (GOV); Wurfel, Brad (DEQ)
Subject: RE: Flint Water Call

I will be at my desk between now and 1.

From: Brown, Jessica (GOV)
Sent: Tuesday, January 27, 2015 12:13 PM
To: Wurfel, Brad (DEQ); Stanton, Terry A. (Treasury)
Subject: Flint Water Call
Importance: High

Hi Brad and Terry –

Do you each have about 15 minutes available in the near/immediate future to hop on a quick call with Sara and Dave? Want to make sure all on same page for Flint water issue. If we could find a time window between now and 1 that would be ideal – otherwise Sara and Dave can do between 1:30-2:30.

Please let me know ASAP. Thanks much!

Jessica M. Brown
Communications Associate
Executive Office of the Governor, Rick Snyder
O: 517-335-6397
[redacted]
Brownj53@michigan.gov

From: Wurfel, Sara (GOV)
Sent: Tuesday, January 27, 2015 4:11 PM
To: Clayton, Stacie (GOV); Hollins, Harvey (GOV); Posthumus, Dick (GOV); Clement, Elizabeth (GOV)
Cc: Agen, Jarrod (GOV); Murray, David (GOV); Rospond, Laurie (GOV)
Subject: RE: Flint water issue

Thanks all.

Just asking about DEQ representation - don't know if that might be helpful given the relatively high level of involvement they have with this issue - both past and present, or if that was for a reason?

-----Original Message-----
From: Clayton, Stacie (GOV)
Sent: Tuesday, January 27, 2015 3:11 PM
To: Hollins, Harvey (GOV); Wurfel, Sara (GOV)
Cc: Agen, Jarrod (GOV); Murray, David (GOV)
Subject: RE: Flint water issue

Greetings All,

The meetings on Wednesday that Harvey referenced on Senior Staff call regarding the Flint water issue are actually being facilitated by Dick Posthumus' Office. They will be held in the Romney building as follows:

10:00am - 11:00am (Internal Meeting in the 2nd Floor Executive Conference Room) Dick Posthumus Dennis Muchmore John Walsh Beth Clement Tom Saxton Harvey Hollins

2:00pm-3:pm (Full Meeting in the Governor's Conference Room) Jerry Ambrose Mayor Walling Howard Croft, Director of the Department of Public Works Tom Saxton Dick Posthumus Dennis Muchmore Beth Clement Sen. Ananich Andy Leavitt John Walsh Harvey Hollins

-----Original Message-----
From: Hollins, Harvey (GOV)
Sent: Tuesday, January 27, 2015 2:30 PM
To: Wurfel, Sara (GOV)
Cc: Agen, Jarrod (GOV); Murray, David (GOV); Clayton, Stacie (GOV)
Subject: RE: Flint water issue

Stacie will set it up.

-----Original Message-----
From: Wurfel, Sara (GOV)
Sent: Tuesday, January 27, 2015 2:27 PM
To: Hollins, Harvey (GOV)
Cc: Agen, Jarrod (GOV); Murray, David (GOV); Clayton, Stacie (GOV)
Subject: Flint water issue

Hi there Harvey -

Just following up on this per brief conversation/mention at yesterday's senior staff meeting and Dave's voice mail to you as well.

I believe you had indicated you had a meeting on this tomorrow, yes?

We need to touch base and get all facts on this situation ASAP. Turning into unfortunate and unnecessary PR issue that we're trying to work with Treasury and DEQ to be on top of, stem, find resolution, etc.

Please call our office today to connect with Dave (as our lead on this) or myself or Jarrod if he's not available for some reason.

Thanks much,
SW

Sent from my iPad

From: Wurfel, Brad (DEQ)
Sent: Friday, January 30, 2015 10:14 AM
To: Murray, David (GOV)
Subject: RE: When you have a few minutes today

Yes. But my answer is going to be let's not just yet. And the reason is that I don't want my director to say publicly that the water in Flint is safe until we get the results of some county health department epidemiological traceback work on 42 cases of Legionnaires disease in Genesee County since last May. I'll explain more on the phone. Or we can talk at Ken's lunch …

From: Murray, David (GOV)
Sent: Friday, January 30, 2015 10:08 AM
To: Wurfel, Brad (DEQ)
Subject: When you have a few minutes today

…can I call to pick your brain about a potential Tuesday event in Flint about the water?

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

From: Clayton, Stacie (GOV)
Sent: Friday, January 30, 2015 10:44 AM
To: Wisniewski, Wendy (GOV); Hall, Jean (GOV); Rospond, Laurie (GOV); Brown, Jessica (GOV)
Cc: Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Posthumus, Dick (GOV); Murray, David (GOV); Hollins, Harvey (GOV)
Subject: Flint Conference Call

Greetings All,

Harvey would like to schedule a brief conference call today regarding next steps on Flint water matters. Please let me know DM. EC, JW, DP and DM availability for a call:

11:30am
12:00pm
1:00pm
1:30pm
2:00pm
2:30pm
3:00pm

Thank you,
Stacie

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?

Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

Hi Jen, Angela,

Ron Fonger from The Flint Journal left me a message stating that DHS told the Genesee Area Intermediate School District told the Head Start program not to use city of Flint
water.

Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is [redacted]

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
([redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 11:07 AM
To: Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?

Should I check with DEQ?

Angela

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:06 AM
To: Minicuci, Angela (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

This is news to me. I can ask Ron.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

Hi Jen, Angela,

Ron Fonger from The Flint Journal left me a message stating that DHS told the Genesee Area Intermediate School District told the Head Start program not to use city of Flint
water.

Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is [redacted]

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510

P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
[redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:19 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Not on our end, I think we covered it last week! I was just curious so I could be ready for calls.

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:15 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Our event is 3 p.m. today. Is there anything that might be important for us to know in advance?

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:10 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Hi Dave – is there an event still planned for this week?

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:08 AM
To: Minicuci, Angela (DCH); Wheaton, Bob (DHS); Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

This is news to me. Let me check with Ron for some details.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

Hi Jen, Angela,

Ron Fonger from The Flint Journal left me a message stating that DHS told the Genesee Area Intermediate School District told the Head Start program not to use city of Flint
water.

Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is 810-347-9963.

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
[redacted]
Wheaton8@michigan.gov
www.michigan.gov/dhs

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 11:23:45 AM
To: Murray, David (GOV); Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

Thanks. I just left him a voice mail. I wonder if it's from U.S. Health and Human Services?

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:22 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

I asked Ron to go back to the GISD for some specific information about the recommendation, asking for specific department names and people.

We'll get to the bottom of this.

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:19 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Not on our end, I think we covered it last week! I was just curious so I could be ready for calls.

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:15 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

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Sent: Tuesday, February 03, 2015 11:42 AM
Subject: FW: City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water

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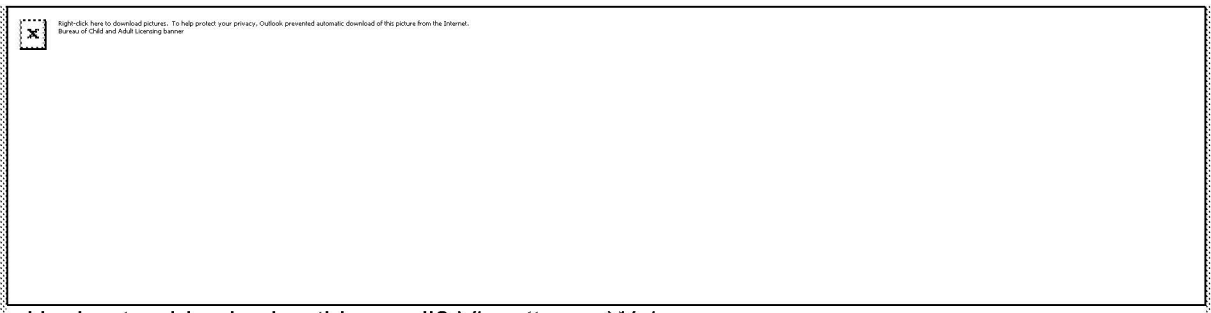
Colleen Nelson, LMSW
Child Care Program Consultant
Bureau of Children and Adult Licensing
(517) 284-9733
Fax: (517) 284-9709

From: Michigan Dept of Human Services [mailto:MIDHS@govsubscriptions.michigan.gov]
Sent: Thursday, January 29, 2015 3:44 PM
To: Nelson, Colleen (BCAL)
Subject: City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water



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This service is provided to you at no charge by Michigan Dept of Human Services.

This email was sent to nelsonc7@michigan.gov using GovDelivery, on behalf of: Michigan Dept of Human Services · 235 S. Grand Ave W. · Lansing, MI 48909 · 1-855-275-6424

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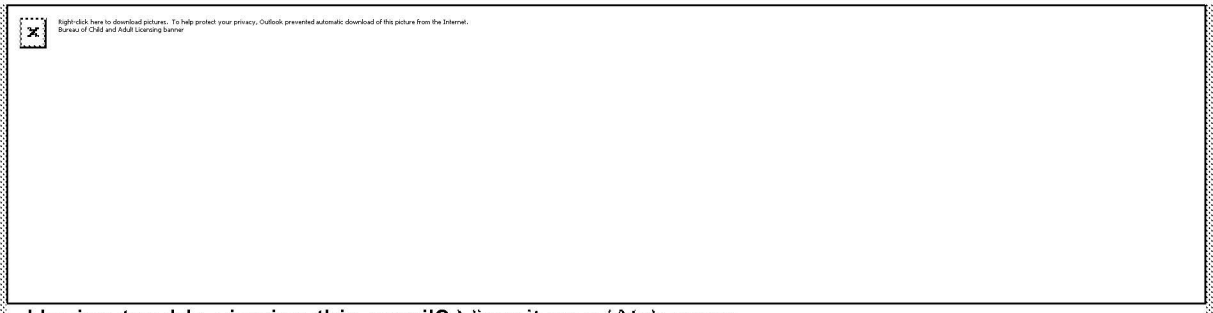

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On Feb 3, 2015, at 12:07 PM, Wheaton, Bob (DHS) <WheatonB@michigan.gov> wrote:

> Everyone,
>
> Attached is a DHS Bureau of Children and Adult Licensing GovDelivery email that went out to subscribers of the BCAL newsletter. It doesn't prohibit child care centers from using Flint water, but suggests that they seek medical advice or use bottled water. So maybe that's what the intermediate school district is talking about regarding the Head Start program.
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> It's possible MDE could have issued something as well, so I'll check with them.
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From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:22 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

I asked Ron to go back to the GISD for some specific information about the recommendation, asking for specific department names and people.

We'll get to the bottom of this.

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This is news to me. Let me check with Ron for some details.

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Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM

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Subject: Flint Head Start told to not use city of Flint water?

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Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is [redacted]

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 3:27 PM
To: Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?

Dave,

My response to Ron would be that the Bureau of Children and Adult Licensing included in its e-newsletter an article that made subscribers aware of the situation in Flint. BCAL licenses providers of daycare, adult foster care facilities and homes for the aged, and thought it would be good to alert those providers. It was intended to be informational.

Hope everything is going well today and sorry to complicate things with this issue.

Bob

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 2:02 PM
To: Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Re: Flint Head Start told to not use city of Flint water?

Bob, if that went out on Jn. 29, that's what he's referring to. Do you have a response if I refer him to you?

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From: Wheaton, Bob (DHS)
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Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 6:02 PM
To: Murray, David (GOV)
Subject: Re: Flint Head Start told to not use city of Flint water?

I got back to him, so we should be good

Sent from my iPhone

On Feb 3, 2015, at 5:33 PM, "Murray, David (GOV)" <MurrayD1@michigan.gov> wrote:

> Bob, can you get back to Ron Fonger, or do you need me to do that?
>
> Thanks!
>
> ---
>
> **From:** Wheaton, Bob (DHS)
> **Sent:** Tuesday, February 03, 2015 2:40 PM
> **To:** Minicuci, Angela (DCH); Murray, David (GOV)
> **Cc:** Smith, Jennifer (DCH)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?
>
> Hi Dave,
>
> I attached the Bureau of Children and Adult Licensing (BCAL) GovDelivery email in my earlier email, but I've cut and pasted below for easier access. As you'll see, the article is making subscribers (primarily people who have licensed day cares and other facilities) aware of the city of Flint warning residents of potential dangers in the drinking water. BCAL is not ordering anyone to do anything. I apologize for not notifying the Governor's Office. I didn't see this until after it went out, and it didn't occur to me that the governor's office would need to be aware of it. In retrospect I should have let you know.
>
> Please let me know if you need any additional assistance.
>
> Thanks,
>
> Bob

Having trouble viewing this email? View it as a Web page.

City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water

The city says there's been too much disinfection byproduct in Flint's water system recently,

something that -- over many years could cause liver, kidney or central nervous system problems and an increased risk of cancer.

The notice from the city says Flint water is safe to drink but warns that those with a severely compromised immune system, who have an infant or who are elderly may be at increased risk and should seek advice about drinking water from their health care provider.

For others, there is no need to boil water or take other actions, the notice says.

It is recommended that licensed child care providers and licensed adult foster care and homes for the aged providers seek medical advice or use bottle water when serving individuals at increased risk as outlined above.

For more information, go to to the city's website at http://cityofflint.com.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 2:16 PM
To: Murray, David (GOV); Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

I agree about the concern with this notice going out. Bob and I spoke about this. Bob, I know you may not be involved when every messages like this go out, but I think a conversation should be had with local DHS offices who use GovDelivery about what is appropriate to send and what is not.

Angela

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Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Wurfel, Brad (DEQ)
Sent: Wednesday, February 04, 2015 4:53 PM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Flint Water

Importance: High

Laughing so hard I'm crying right now.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 4:51 PM
To: Natalie.zarowny@abc12.com
Subject: Flint Water
Importance: High

Hi Natalie,

I received your message (below). I apologize for not responding sooner.

The message that the DHS Bureau of Children and Adult Licensing (BCAL) sent regarding this issue was to subscribers of a BCAL e-newsletter – primarily received by licensees for child care facilities, adult foster care facilities and homes for the aged. I'm not really comfortable sharing that with you.

The message was a recommendation – not an order – that suggested the licensees in Flint seek medical advice or use bottled water when serving young children and the elderly. BCAL was working off what the agency thought was the most current information on Flint water quality when it issued the e-newsletter. However, it would be best for you to speak to the Michigan Department of Environmental Quality (DEQ) about that, because that state agency has the most up-to-date information about Flint water quality.

You can contact my colleague Brad Wurfel from DEQ at 517-284-6713, 517-230-8006 or wurfelb@michigan.gov.

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

Name: Natalie
Agency: ABC News 12 -Flint
Phone: 847-533-8812
Email: Natalie.zarowny@abc12.com

RE: Head start programs in Flint are giving bottled water instead of Flint water as a result of a publication from DHS. She would like this publication to reference for her story. She does not necessarily have to speak with you.

From: Stanton, Terry A. (Treasury)
Sent: Thursday, February 05, 2015 2:19 PM
To: Wurfel, Brad (DEQ); Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Would add that the city (Earley, Ambrose, etc.) have been unequivocal that doing so would cost at least $1m per month...per the DWSD "offer"...and the city simply cannot afford that.

I have also heard that the city no longer owns a section of pipeline that would have to be used in making any re-connection...making that more difficult and expensive.

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 05, 2015 2:15 PM
To: Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Stanton, Terry A. (Treasury)
Subject: Fwd: pastor harris

Thoughts on this? Who responds? How?

Sent from my iPhone

Begin forwarded message:

> **From:** "Fonger, Ronald" <RFONGER1@mlive.com>
> **Date:** February 5, 2015 at 1:06:36 PM EST
> **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> **Subject: pastor harris**
>
> Brad:
> I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action.
> He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.
> Would you or Dave Murray want to comment on whether that's under consideration?
> I just wanted you guys to know what he's saying – without equivocation – in the story.
> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> mobile [redacted]
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Muchmore, Dennis (GOV)
Sent: Thursday, February 05, 2015 2:19 PM
To: Wurfel, Brad (DEQ)
Cc: Murray, David (GOV); Wurfel, Sara (GOV); Stanton, Terry A. (Treasury)
Subject: Re: pastor harris

I talked with him earlier today. We can say that we are exploring all the options available to us to respond to the concerns of the citizens of Flint. Pastor Harris is our point of contact and we can say that also.

On Feb 5, 2015, at 2:15 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

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Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

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Sent: Thursday, February 05, 2015 3:11 PM
To: Stanton, Terry A. (Treasury); Wurfel, Brad (DEQ); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Only problem with that is that the citizens of Flint say they are paying more now than they did when they were connected with DWSD. The city, after all, is not giving the water away free right now, so there is some kind of equalization that comes into play here. Additionally, we just gave them $2M so if we need to use it for a reconnect that's probably a good use of the money as opposed to people refusing to use city water. Since we're in charge, we can hardly ignore the people of Flint. After all, If GM refuses to use the water in their plant and our own agencies are warning people not to drink it, another expressing continuing concern over quality, and the differential between what we now collect and what we would pay DWSD is not significant, we look pretty stupid hiding behind some financial statement.

From: Stanton, Terry A. (Treasury)
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mobile [redacted]
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From: Kelly Rossman-McKinney [krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Dave & Harvey: We are working with Veolia North America, the water consulting team Flint has hired to "assess the situation." We're planning to hold a media roundtable with city officials on Tuesday to introduce the Veolia team to local reporters. Gerry Ambrose suggested we invite some of the folks you invited to attend the newser earlier this week. Is that a list you can share with me or would it be better for the invite to come from you or the EM directly? I don't have a specific time yet but can provide that information for you when it is available. What do you think?

Kelly

PS I forgot to say thanks!!!!

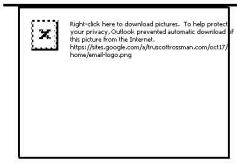
Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download this picture from the Internet.
https://sites.google.com/a/truscottrossman.com/ecl17/home/email-logo.png

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

Cell: [redacted]
Office: (517) 487-9330
Fax: (517) 487-5080

From: Kelly Rossman-McKinney [krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:42 PM
To: Murray, David (GOV)
Subject: RE: Flint Water

Yup -- sorry! Guess I wasn't too clear on that, was I? SHEESH!!!!



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Cell [redacted]
Office: (517) 487-9320
Fax: (517) 487-5080

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Friday, February 06, 2015 3:39 PM
To: Kelly Rossman-McKinney
Subject: RE: Flint Water

Hi Kelly,

Has the city itself hired Veolia?

Thanks!

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Sent: Friday, February 06, 2015 3:22 PM
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From: Wurfel, Brad (DEQ)
Sent: Monday, February 09, 2015 9:21 AM
To: Wheaton, Bob (DHS); Lasher, Geralyn (DCH)
Cc: Muchmore, Dennis (GOV); Murray, David (GOV); Minicuci, Angela (DCH); Stanton, Terry A. (Treasury)
Subject: FLINT WATER NOTES

Hey, friends. Anticipating more coverage this week on Flint, want to make sure we are all looped in and on the same page. Treasury takes calls on funding and money and the EM. DEQ takes calls on water quality. Here's what I can share about the water quality part.

Total Trihalomethanes (TTHM) are a byproduct of too much chlorine to kill organic material in a water supply. They are among the 80 toxins water suppliers monitor. They are considered a long-term health hazard. As such, they're sampled from water systems every quarter. Systems are required to remain below 80 parts per billion on a yearly average (four quarters). Flint exceeded the average in the course of three quarters last year.

Water system operators around the state periodically get a high result for TTHMs. When consecutive quarters of testing remain at high levels, it's usually a sign that operators are using too much chlorine to address high levels of organic matter in their water source. This most frequently affects systems that use surface water as a source. And several municipal water systems around the state do use surface water (rivers) as a source.

When a water system exceeds this standard, the operator gets a very formally worded violation notice from DEQ that says, effectively, "hey, your numbers are high. Alert your customers and figure out how you're going to bring your numbers back down." This is not as serious as a boil water advisory situation. But, the (think decades) long-term risk of drinking water with high TTHMs is an increased risk of exposure to cancer causing agents, so it's not a situation that the state can accept as status quo.

Because TTHM is measured on an annual (quarterly) basis, it will take a couple quarters of clear results before the city's average falls below the guidelines. This

means Flint will probably be issuing another public notice about TTHM in March, despite that the high samples were late last summer.

Flint's numbers have dropped dramatically since the November testing and they're presently in compliance with state drinking water standards.

The water as it leaves the plant is clean, sanitary and safe. However, the water supply system is old, poorly maintained and many residents' connections are also old and poorly maintained. Thus, some residents are experiencing water that smells off or is discolored. This is from the transmission system, not the production system. The three top issues appear to be

a. Hard water interacting with cast iron pipes, causing water that looks rusty (and likely tastes a bit irony)
b. Water sitting too long in the pipes because of valves not working properly or limited users in some sections of the system; or,
c. Residents with old homes that have cast iron connections contributing to the hard water issue.

So, how do we message this issue in light of the many variables at play?

1. Right now, water produced at the Flint plant is meeting state safe drinking water standards.
2. DEQ is aware that many residents have concerns about smell, color and other aesthetic qualities of their water. There are several potential causes for aesthetic water conditions. Residents with these concerns are encouraged to contact the City first to report problems. They also can contact the Michigan DEQ, but the City operates the system and needs to be alerted to concerns with their system to help document problem areas and prioritize improvements.
3. Total Trihalomethane (TTHM) is odorless and colorless. It is regarded as a long-term health concern. TTHM was included in the list of toxins screened under the Safe Drinking Water Act because of its potential for long-term potential health concerns. This is why it is only sampled quarterly. The water operator is required by law to notify residents when the annually averaged standard has been exceeded, and the system operator is required to take active steps to get back into compliance with the standard for TTHM.

4. Residents received notice because the law requires transparency and works to help ensure residents can make informed decisions. The notice residents received early this month is a totally separate issue from the water discoloration issues some residents are reporting.
5. The DEQ continues working with Flint Water system operators to ensure that residents receive water that complies with state drinking water standards. This system is tested regularly and rigorously, and the results are reported to customers as outlined in the Safe Drinking Water Act.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 3:57 PM
To: Wurfel, Brad (DEQ)
Subject: RE: IMPORTANT MEDIA ISSUE Please call

Here's what our Bureau of Children and Adult Licensing emailed on Friday:

City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water

The city says there's been too much disinfection byproduct in Flint's water system recently, something that -- over many years could cause liver, kidney or central nervous system problems and an increased risk of cancer.

The notice from the city says Flint water is safe to drink but warns that those with a severely compromised immune system, who have an infant or who are elderly may be at increased risk and should seek advice about drinking water from their health care provider.

For others, there is no need to boil water or take other actions, the notice says.

It is recommended that licensed child care providers and licensed adult foster care and homes for the aged providers seek medical advice or use bottle water when serving individuals at increased risk as outlined above.

For more information, go to to the city's website at http://cityofflint.com.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 3:41 PM
To: Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ)
Cc: Feuerstein, Heather (DEQ)

Subject: IMPORTANT MEDIA ISSUE Please call
Importance: High

Hi Brad, Karen,

Could one of you call me ASAP regarding a media crisis having to do with Flint water?

Thanks!

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

From: Hollins, Harvey (GOV)
Sent: Monday, February 09, 2015 2:18 PM
To: Kelly Rossman-McKinney; Murray, David (GOV)
Cc: Clayton, Stacie (GOV)
Subject: RE: Flint Water

Kelly,
I am deferring this to our communications team. Let me know if you connect with them.

Best,
Harvey

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Dave & Harvey: We are working with Veolia North America, the water consulting team Flint has hired to "assess the situation." We're planning to hold a media roundtable with city officials on Tuesday to introduce the Veolia team to local reporters. Gerry Ambrose suggested we invite some of the folks you invited to attend the newser earlier this week. Is that a list you can share with me or would it be better for the invite to come from you or the EM directly? I don't have a specific time yet but can provide that information for you when it is available. What do you think?

Kelly

PS I forgot to say thanks!!!!

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

Cell: [redacted]
Office: (517) 487-9320
Fax: (517) 487-5060

From: Kelly Rossman-McKinney <krossman@truscottrossman.com>
Sent: Monday, February 09, 2015 2:33 PM
To: Hollins, Harvey (GOV); Murray, David (GOV)
Cc: Clayton, Stacie (GOV)
Subject: RE: Flint Water

Thanks. We're going to do community meetings later in the week rather than pile on to the media roundtable. Dave, please let me know who you recommend we include. Thanks.

From: Hollins, Harvey (GOV) [mailto:hollinsh@michigan.gov]
Sent: Monday, February 09, 2015 2:18 PM
To: Kelly Rossman-McKinney; Murray, David (GOV)
Cc: Clayton, Stacie (GOV)
Subject: RE: Flint Water

Kelly,
I am deferring this to our communications team. Let me know if you connect with them.

Best,
Harvey

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

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Kelly

PS I forgot to say thanks!!!!

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Cell: [redacted]
Office: (517) 487-9320
Fax: (517) 487-5080

From: Agen, Jarrod (GOV)
Sent: Tuesday, March 03, 2015 8:48 AM
To: Murray, David (GOV)
Subject: FW: Contaminated Drink Water if Flint

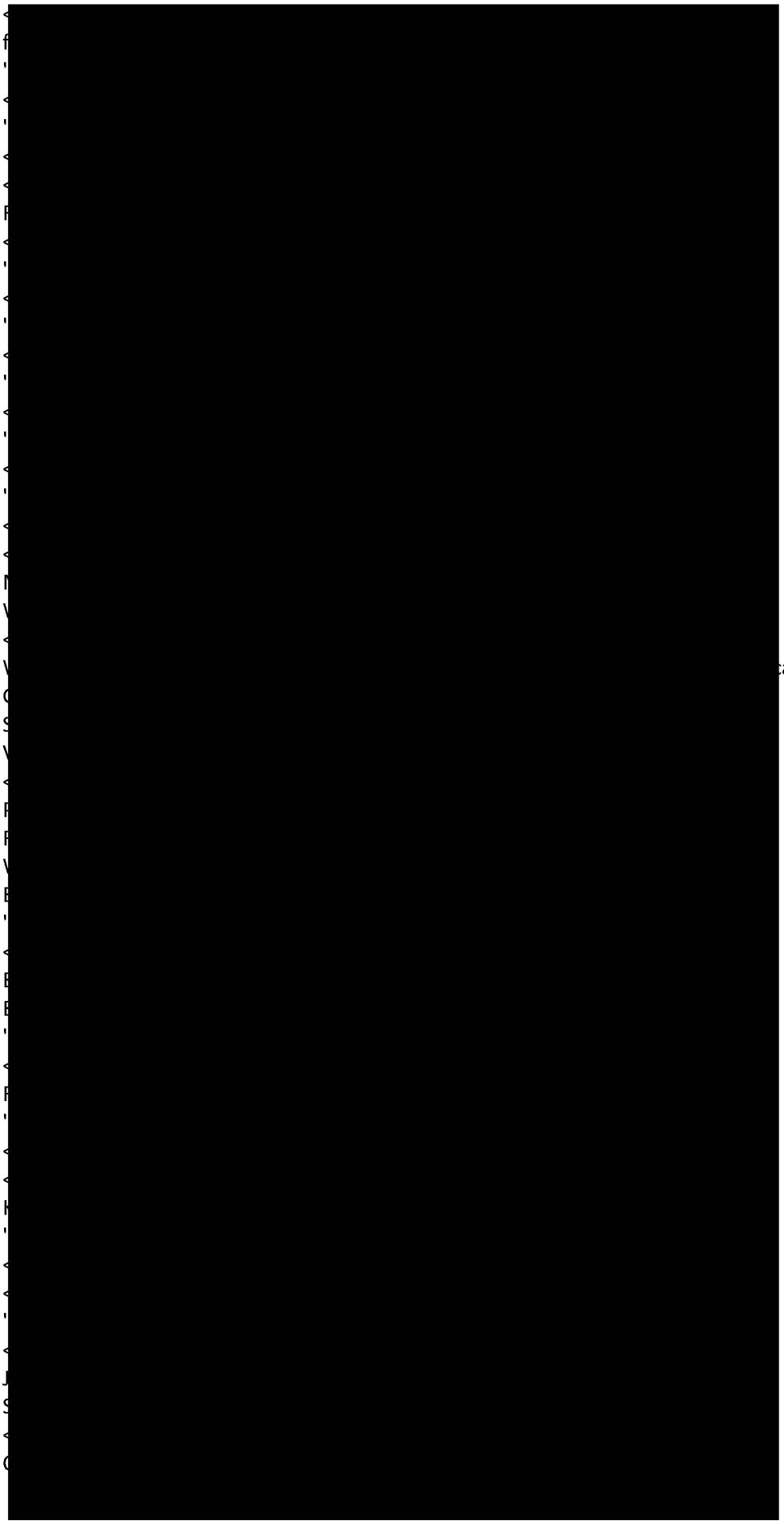
-----Original Message-----
From: Workman, Wayne (TREASURY)
Sent: Tuesday, March 03, 2015 4:18 AM
To: Muchmore, Dennis (GOV)
Cc: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Re: Contaminated Drink Water if Flint

I am going to price the water to see how much we can buy

Sent from my iPhone

> On Mar 2, 2015, at 11:56 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.
>
> How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.
>
> If we procrastinate much longer in doing something direct we'll have real trouble.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> From: Kelly Rossman-McKinney
> <krossman@truscottrossman.com<mailto:krossman@truscottrossman.com>>
> Date: March 2, 2015 at 8:26:34 AM EST
> To: Dennis Muchmore
> <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>
> Subject: FW: Contaminated Drink Water if Flint
>
> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.
>
> [https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.
> png]

>
>
> Kelly Rossman-McKinney
> CEO
> Truscott Rossman •
> truscottrossman.com<http://www.truscottrossman.com/>
> Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
> 200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
> 125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503
>
> Cell: [redacted]
> Office: (517) 487-9320
> Fax: (517) 487-5080
>
>
>
> From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
> Sent: Monday, March 02, 2015 7:36 AM
> To: Kelly Rossman-McKinney
> Subject: Fwd: Contaminated Drink Water if Flint
>
>
> Welcome to Monday. Please advise asap as to any next steps you recommend, if any.
> ---------- Forwarded message ----------
> From: "Dayne Walling"
> <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>
> Date: Mar 2, 2015 7:29 AM
> Subject: Fwd: Contaminated Drink Water if Flint
> To: "Gerald Ambrose"
> <gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>, "Natasha
> Henderson"
> <nhenderson@cityofflint.com<mailto:nhenderson@cityofflint.com>>,
> "Peter Bade" <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>
> Cc:
>
> FYI:
> ---------- Forwarded message ----------
> From: [redacted]>>
> Date: Sat, Feb 28, 2015 at 2:09 PM
> Subject: Contaminated Drink Water if Flint
> To: [redacted]
> [redacted]
> Cc: "[redacted]
> [redacted]



>
>
> Good Afternoon, Attorney Randall!
>
> Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!
>
> We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!
>
> I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.
>
> The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluroride/ej.html<http://www.actionpa.org/fluroride/ej.html> regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.
>
> Thank you very much in advance!!
>
> I remain.
>
> [redacted] Concerned Resident
>
>
>
> --
> Dayne Walling
> Mayor, City of Flint

> City Hall, 1101 S. Saginaw St.
> Flint, MI 48502
> 810-766-7346
> mayor@cityofflint.com<mailto:mayor@cityofflint.com>
> www.cityofflint.com<http://www.cityofflint.com/>
> follow me on twitter at http://twitter.com/mayorwalling
> <CCF02282015_0002.pdf>

From: Clayton, Stacie (GOV)
Sent: Friday, March 06, 2015 10:27 AM
To: Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Murray, David (GOV)
Cc: Hollins, Harvey (GOV)
Subject: FW: Tap Filters

You all were not included on the original email and Harvey wanted to make sure you had this information.

Stacie

Begin forwarded message:

From: "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
Date: March 5, 2015 at 4:26:25 PM EST
To: "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Wyant, Dan (DEQ)" <WyantD@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>
Cc: "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
Subject: FW: Tap Filters

Harvey,
Since group call Tuesday I have been working out how the filter idea might take shape.

To reiterate some key points so we're all clear:

1. DEQ does not inspect individuals' homes in a situation like this. It's the city's system, their operators handle all complaints and maintenance. In fact, our folks alerted me that the city's got union rules in place forbidding any contractor from touching the system.
2. DEQ's role is limited to ensuring the plant is operating to state standards and the water it produces meets potability standards. The aesthetic issues drawing concern from residents -- color, odor, taste -- stem from a variety of things. Age of the system and prolonged lack of upkeep is the leading factor. But in some areas, another contributing factor is changes in water flow -- source used to come from the south, now comes from the north, so some pipes are flowing in reverse, stirring up whatever was settled for a long time. In some sections, large pipes that historically served large communities are now serving a much smaller customer base, contributing to water stagnating in the system. In some areas, household connections are old and worn, so two neighbors may be having dramatically different experiences. My point is, the challenge takes many forms and there's no single solution that will bring sweeping change. The two consultants hired by the city have, as I understand it, both reinforced this idea in their assessments, so that's good.

3. The fix for this will be years in the making, truly. Even if full funding were available, 'big dig' projects can't all happen at once. The city needs to get an assessment of its infrastructure so it can prioritize its needs, and I understand

they're working on that. In the near term, maintenance this spring / summer – things like cleaning the pipes in key sections and flushing the system via the hydrants – could offer some short term results. I know nobody wants to just wait for spring, but that is something important to keep in mind.

4. In the meantime, the group discussed possibly making home water filters available somehow. The National Safety Foundation is a Michigan company, headquartered and founded in Ann Arbor, that develops standards for all kinds of infrastructure. They're a globally recognized source for standard setting. A look at their site reveals there are myriad filtration options on the market and within each type (faucet mounted, whole house line filters, etc) there are filters that focus on different aspects of purification.

   If this idea begins to get legs, I'd suggest testing some different models on the local water at the customer level to see if they work. I'd also suggest the idea be focused on tap-mounted models to promote clean, appealing drinking water. And I'd suggest this program could be funded in whole or in part by the state, but would need to be administered by the city (reinforcing the fact that they own, operate and service the system). I've got some information on filter models below.

   Two more considerations: One, while the state has provided residents in some communities with bottled water in the past, it always has to do with their water being somehow contaminated – as in, some kind of chemical plume that impaired local drinking water sources. This would be the first time the state took steps to deal with what is an aesthetic issue on a system where the water is meeting state drinking water standards.

Water filter info:
ANSI NSF Standard 42 Covers bacteriostasis, taste and odor (associated only with chlorine removal), and other aesthetic conditions
http://standards.nsf.org/apps/group_public/download.php/19895/NSF_42-11%20-%20watermarked.pdf

ANSI NSF Standard 53 Covers health effects removal
http://standards.nsf.org/apps/group_public/download.php/19896/NSF_53-11a%20-%20watermarked.pdf

It is important to note that the filters are not required to meet all aspects of the standard, only the portions they want to make claims for. So product information for each filter must be reviewed to determine its applicability.

Most of these point of use filters are basic activated carbon filters that simply remove taste and odor specifically associated with chlorine, not other things like iron, manganese, hydrogen sulfide, etc. that can also impact taste and odor as well as color.

It is important to recognize that taste and odor is generally an individual preference and such standards have for the most part not been developed because groups of individuals may still consider taste and odor issues to exist even after levels for such a standard have been met.

Other considerations are that the test water for such filters attempting to meet the standard uses hardness levels of 170 mg/L or less. Flint's water at times may be above this level, which could then impact filter performance and longevity.

Most of these filters are designed to be replaced after 100 gallons or less of use, a period of about 3 months for most households. In addition the tests allow for initial pressure drops of up to 15 psi. This may limit use in households that already rely on minimum pressure within their household plumbing.

Regarding the health effects standards, as the Flint water system already meets such requirements, with the exception of the current TTHM locational running annual average, there is little point to the use of these filters for such a purpose.

To the point you'd asked about the other day, while Flint and Detroit are leading examples of unmaintained infrastructure, Flint is not alone by any means.

This recent infrastructure report card
http://www.infrastructurereportcard.org/michigan/michigan-overview/
Lists Michigan with a $13.8 Billion need over the next 20 years.

http://www.infrastructurereportcard.org/a/#p/state-facts/michigan

Here's a link to the 2009 Report Card for Michigan Infrastructure
http://www.michiganreportcard.com/

From the report:

"A significant portion of the state's primary distribution system is nearing 100 years old. CWS are facing a significant challenge to maintain the vast network of aging, underground infrastructure. Within the city of Detroit alone, approximately 80% of its distribution piping was installed prior to 1940, which is not unusual for CWS in Michigan."

"The age of the majority of the state's distribution system is the primary contributor to normal decay and failure. In many cases, pipe life has far exceeded useful service life. Much of the older water systems consist of undersized mains constructed of materials such as unlined cast iron pipe. Minor fluctuations in system flows or pressure may cause red water complaints and even result in pipe failure. All CWS should have routine flushing and valve maintenance programs; however many are hesitant due to the time and cost."

"Under the Stage 2 Disinfection Byproducts Rule, all CWS that disinfect are required to provide increased trihalomethane (THHM) and haloacetic acid (HAA5) monitoring due to the potential byproducts of chlorine reactions within the pipe system. Corrosion, scale, solid suspension on the interior sidewall of pipe, in addition to the age and condition of the system will require diligent rehabilitation investment to maintain system integrity."

"While better materials and advanced technology is available to replace the aging distribution system, resources remain scarce when compared with the magnitude of the rehabilitation task at hand. Too often, distribution system replacement costs are underfunded and the first item to be slashed when budget problems arise. Overall, distribution system maintenance is reactionary in much of the older systems. Since the majority of the antiquated system will require removal and replacement beyond the CWS funding resources for systematic upgrade, a reactionary rehabilitation program is inevitable and must be funded accordingly."

Call or email me if you need anything further.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Wurfel, Brad (DEQ)
Sent: Wednesday, March 11, 2015 12:39 PM
To: Wurfel, Sara (GOV)
Cc: Murray, David (GOV)
Subject: RE: PIO report

Flint: They're technically still in violation of the total trihalomethane rule this quarter. All tested water in February was well below the standard, but the standard is calculated based on an average that includes the previous three quarters, and the fall 2014 results were mighty high. That'll be in the rearview with the next round of testing late spring.

In terms of next steps, not sure if you mean next steps for the city or Team RS. The city has spent tens of thousands hiring water specialists to advise them formally of what they already know and already were told by the DEQ: If you do no maintenance on your drinking water system for 40 years, it eventually begins to fail in ways big and small. However, they've gotten some positive press for hiring shiny, fancy out of state people who purport to specialize in river-based water supply challenges, so there's that.

We've encouraged them to develop a triage list of maintenance areas -- which pieces of this 500-mile system are in greatest need right now, this year and next year? Once they've got that, the next step will be figuring out how to pay for it without causing another rate increase. Honestly, the big squall in Flint (and I heard Jerry Ambrose say it early this week) comes down to the fact that folks are paying approximately double what they should for water. There's no way to adjust that in the near term, but if team RS wants to truly help, treasury could look for some funding to assist with emergency maintenance projects this spring.

Team RS continues looking at some immediate term gestures, including dropping off bottled water or filters to homes that say they've got discolored or stinky water. If someone asked me what I think is the best possible 'thing' we could do to be seen helping Flint, it's this: Treasury gave them $2 million a couple months ago. $900,000 of that was to do system-wide assessment. That project is underway. When they get results, it'll include the list of hotspots in their system that are most in need of immediate address.
They need to do some maintenance work, like scrubbing the mung out of their pipes in some areas. THAT will reduce the discolored / odorific water. If there's a way to have the state support that work, it'd be huge help.

Aquaculture: It'll be a big story at some point, but right now we're just trying to make sure the public hears about it from us first, and that they understand we're setting the bar high.

From: Wurfel, Sara (GOV)
Sent: Tuesday, March 10, 2015 5:19 PM
To: Wurfel, Brad (DEQ)
Cc: Murray, David (GOV)
Subject: RE: PIO report

Very helpful summary. Thanks much.

Few quick Qs:

Where do we stand on Flint water and next steps?

Please do keep us posted on net pen aquaculture as noted and before anything goes out publicly.

[redacted]

From: Wurfel, Brad (DEQ)
Sent: Tuesday, March 10, 2015 12:06 PM
To: Murray, David (GOV); Agen, Jarrod (GOV); Wurfel, Sara (GOV)
Cc: Holton, Jennifer (MDA); Golder, Edward (DNR); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Tommasulo, Karen (DEQ)
Subject: PIO report

Sorry I missed the meeting. Had a couple conflicts. Here's what I want to share with you:

[redacted]

3. **Flint Water:** had a meeting yesterday with a company Baird put in the room to discuss their ozone technology. It was a good conversation but a non-starter for several reasons (Flint already has an Ozone system to modify its water, this company hasn't had its system certified for use on public drinking water supplies, and the problem they propose to address is not at the water plant but throughout various sections of the distribution system). More broadly, Harvey is looking for a 'thing' the state can be doing for Flint that will position SOM / RS positively. Suggestions range from handing out home water filters (think Britta faucet mount) to passing out jugs of water. After consulting with our experts in the Drinking water program, what we've really come to at DEQ is that if there's funding from treasury (or some charitable donor foundation), the best short-term use of dollars would probably be to hire a company to 'pig' the lines in the distribution system. This is a routine maintenance activity in municipal systems that involves an in-line device under pressure that clears funk out of the lines. **The good news on Flint**: Flint EM Jerry Ambrose noted yesterday that the city has some work to do on its system in the weeks ahead; the TTHM issue is quickly going away; the 'brown water' folks are loud but

really few in number; the consultants are doing their work to make suggestions to help the city prioritize its needs; and, broadly, nobody seems to be targeting the administration recently.

[redacted]

WYANT THIS WEEK:

[redacted]

Call me with questions. Thanks, and have a great week.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Wurfel, Brad (DEQ)
Sent: Friday, March 13, 2015 4:02 PM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: READ THIS PLEASE
Attachments: FOIA Request Flint Water.doc

Political flank cover out of City of Flint today regarding the spike in Legionnaires cases. See enclosed. Also, area ministers put a shot over the bow last night in MIRS with a call for Snyder to declare state of emergency there and somehow 'fix' the water situation.

It may be very advantageous to get Treasury, Gov's office, DCH, DEQ and Flint EM around a table Monday to do the following:

1. Update on what the City is doing.
2. Update on what County Health department is working on.
3. Discussion of what we might all do next.
4. Coordination of communication / messages.

Did not want to reach out to Dennis without your approval / support. Please advise.
b

From: Busch, Stephen (DEQ)
Sent: Friday, March 13, 2015 3:47 PM
To: jhenry@gchd.us
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Information Request and Documentation

Mr. Henry,

The January 27, 2015, FOIA request you provided was directed to the City of Flint, not the DEQ. The DEQ has no record of a FOIA request from your office for such information. It is our understanding that the City has responded to your FOIA request, has helped you adequately redefine your request within the City's scope of public record to address such ambiguities as "any additional areas of concern", and provided you with additional information beyond the scope of your request.

The DEQ fully recognizes the public health threat posed to individuals that contract Legionnaires' Disease with the understanding that the disease is not contracted by ingestion of potable water and therefore not regulated under the federal Safe Drinking Water Act. Your email below claims that you have explicitly explained the situation to our Department. However, since contacting our office early last October to indicate a rise in cases, we have not received any further information regarding your epidemiological investigation into this matter.

Further, conclusions that legionella is coming from the public water system without the presentation of any substantiating evidence from your epidemiologic investigation appears premature and prejudice toward that end.

It is highly unlikely that legionella would be present in treated water coming from the City of Flint water treatment plant given the treatment plant's use of ozone along with complete treatment and chlorine disinfect contact time to comply with federal surface water treatment rules for potable water. Detections of total coliform or heterotrophic bacteria in the City's public water distribution system indicate an environment where bacterial growth may be

supported. However, there is no direct correlation that can be made to the presence of legionella. While total organic carbon levels in potable water may serve as a food source for bacteria growth in private plumbing system, water temperatures in the City's distribution system are below legionella growth range, and chlorine residual levels would also limit such growth.

Our office agrees that water main breaks, water leaks, and system repairs are possible vectors for legionella to enter the public water system. These should be investigated as part of your epidemiology. DEQ staff can be made available to assist GCHD and the City regarding such matters, but to date no request by GCHD for any such meeting has been received, let alone declined as alleged in your email.

If GCHD is seeking assistance to complete its epidemiological investigation regarding this matter, such resource requests should be directed to the Michigan Department of Community Health. Our Office agrees that a multi-agency partnership would be beneficial to move forward and develop a unified response. In that respect, if our Office can be of any further assistance you may contact me directly.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

This situation has been explicitly explained to MDEQ and many of the city's officials. I want to make sure, in writing that there are no misunderstandings regarding this significant and urgent public health issue. The Trihalomethane issues "pale in comparison" to the potential public health risks of Legionella.

I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

January 27, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Water Plant Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide copies of the following:

Provide specific water testing locations and laboratory results within the City of Flint public water system for Coliform, E-coli, Heterotrophic Bacteria and Trihalomethanes from January 1, 2010 to January 27, 2015. Provide any additional water testing that has been conducted for identifying potential public health risks. Include any available mapping of the water testing areas.

Provide a map delineating the boundaries of the City of Flint water distribution system. Include any changes to the boundaries, along with corresponding dates from January 1, 2014 to January 27, 2015.

Provide a map or list of locations, detailing dead ends, pooling, low pressure and any additional areas of concern within the City of Flint water distribution system. Include any modifications to the water distribution system addressing concerns, along with corresponding dates from January 1, 2014 to January 27, 2015.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

From: Fonger, Ronald [RFONGER1@mlive.com]
Sent: Wednesday, March 18, 2015 5:57 PM
To: Murray, David (GOV)
Subject: RE: erin brockovich

She says Flint water fails to meet basic water quality regulations, which I think is a fair comment since we are still in violation of the Safe Drinking Water Act.

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Wednesday, March 18, 2015 5:43 PM
To: Fonger, Ronald
Subject: RE: erin brockovich

I thought the part about the water being unsafe would merit pointing out the DEQ studies.

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Wednesday, March 18, 2015 5:32 PM
To: Murray, David (GOV)
Subject: RE: erin brockovich

Hey Dave:
Thanks for the reply.
I always try to report what I know to be accurate, but in this case, no one from the city has contradicted what Bowcock (and now Brockovich) said about Flint water rates being nearly eight times higher than the national average.
As for the rest, she's giving her opinion about the political situation here and mentioned the governor, mayor and emergency manager so I wanted to give each the chance to respond.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Wednesday, March 18, 2015 5:16 PM
To: Fonger, Ronald
Subject: RE: erin brockovich

Hi Ron,

(I'm assuming your reporting will contrast her statements with what you know to be accurate, so I'll provide a general statement)

We agree that Flint residents need clean, safe water. The governor and state agencies will continue to work closely with Flint leaders to find a solution to the city's long-term water infrastructure needs.

Dave

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Wednesday, March 18, 2015 4:47 PM
To: Murray, David (GOV)
Subject: erin brockovich

Dave:
Erin Brockovich posted this on her Facebook page this afternoon and I've been asked to post about it.
Since it mentions the governor, I wanted to see if your office wants to comment.
Thanks,

Erin Brockovich
2 hrs ·
How to Destroy a City - the American Way.

It has been one month since I became involved with the City of Flint, Michigan, a community expressing deep concern about high sewer and water system rates, for drinking water that fails to meet basic water quality regulations.

The United States Environmental Protection Agency has publish that the average cost for water in the United States is $2.00 per 1,000 gallons, including the service charge. Comparing apples to apples, Flint residents are paying $15.80 per 1,000 gallons, almost 8-times the national average.

The City of Flint starts with a service charge of $39.60 (if divided by a high average of 10 units, it represents an additional $3.90/unit) and a unit charge of $7.92/CCF; Flint's unit is 748 gallons. So, at $11.82 per unit, a 10 unit bill would be equal to $118.20 for 7,480 gallons.

If you can afford the water you're fortunate; if you cannot afford the water you are evicted from your homes or your businesses shutdown.

All of this is perpetrated with Democracy held hostage by a Governor appointed "Emergency Manager"...the elected Mayor a mere ceremonial figure head.

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Ronald Fonger <RFONGER1@mlive.com>
Sent: Monday, April 06, 2015 10:19 AM
To: Murray, David (GOV)
Subject: RE: request for comment

I hear you and yes I am including that definition.

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Monday, April 06, 2015 10:13 AM
To: Ronald Fonger
Subject: RE: request for comment

No, I know YOU know the definition! I'm asking if you're going to include it in the story so the readers know what Davis is actually accusing us of.

Do you know if he was on the council at the time of the request for the switch?

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, April 06, 2015 10:04 AM
To: Murray, David (GOV)
Subject: RE: request for comment

Dave:
You mean the deliberate killing of a large group of people, especially those of a particular ethnic group or nation?
Yes, I do.

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Monday, April 06, 2015 9:52 AM
To: Ronald Fonger
Subject: RE: request for comment

Ron, I'll shoot you over a comment, but I'm hoping that you, in the story, are pointing out what genocide actually is.

Was Davis on the council when the council asked for the switch to Lake Huron water?

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, April 06, 2015 9:22 AM

To: Murray, David (GOV)
Subject: request for comment

Hey Dave:
Just came out of our morning meeting and we've decided to write about the most recent Facebook comments of Flint Councilman Wantwaz Davis (who is also a candidate for mayor).
The comments are similar to those made last month by the president of the Michigan chapter of Al Sharpton's National Action Network, who said Flint water is "almost as bad as gas chambers for Jews." (We spoke out against those comments editorially after covering it as a news story)
Here is Davis' unedited comment, which includes his contention that the governor and emergency manager are "creating an obvious genocide against the residents of Flint."
Thanks,

Wantwaz Davis
18 hrs · Edited ·
It has become apparent to me that the emergency manager and Governor Rick Snyder is creating an obvious genocide against the residents in Flint, Michigan, who are forced to drink the contaminated, unhealthy water, that is going to commit an imminent danger to the lives of those who have a compromised immune system, and infants who biologically doesn't have a fully developed immune system. When I become mayor, I will certainly make the governor and all who took part in continuing to have the residents in Flint, Michigan exposed to this injustice and inexcusable danger accountable; this cannot carry on without someone becoming accountable and or responsible; It is so unfair that people in the future may contract a disease that will carry through the duration of their lives. The emergency manager is choosing finances and fixture of infrastructure, i.e., old pipes that hasn't been worked on for the past 60 to 70 years over lives and welfare of innocent civilians. Someone has to be charged with this neglect and imposition of danger amongst a helpless people; all of this is the effects of bad leadership. I must reiterate and can never say it enough, when I become mayor, which will be the best leader and or Chief administrator the City Of Flint, Michigan has ever chose. I will fight hard, not only against the unjust conditions we have long suffered from, but will make someone accountable for this genocide and address these unfortunate conditions around the nation and beg for the assistance of the Department of Justice (United States Attorney General's office) to do a through investigation, so in the end, if any one contracts a disease in the future, I would attempt to have them charged and brought to justice, including a civil suit, in the federal courts; someone has to be punished for the ills of the residents of Flint, Michigan. In conclusion, please vote August 4, 2015, for Wantwaz Davis for Mayor. Bad leadership and decision making has to come to an end at some point and time, and that will certainly be the day I am sworn in as your new mayor and Chief Administrator. This is a picture of reminder that in the past summer, I conducted 4 protest against the contaminated water and high water bills, I was telling people about the unhealthy water, before any notices came out to the public, attempting to keep these issues at the forefront, as mayor I will continue to fight even harder, these issues will not die until justice is brought to the people and someone is charged for this imminent genocide.

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Brad (DEQ)
Sent: Monday, April 06, 2015 11:33 AM
To: Murray, David (GOV)
Subject: RE: request for comment

The governor believes **everyone** in Michigan deserves clean, safe drinking water. It is why Michigan has a great team of professionals at the DEQ to oversee municipal drinking water operators around the state and make sure they comply with state and federal drinking water standards. And it is worth noting that, today, the city's drinking water system is producing water that meets state and federal standards.
More alarming than the councilman's incendiary and inaccurate remarks is the underexamined fact that the city has failed to properly maintain its drinking water system for the past 40 years, and the impact of that system-wide neglect is starting to show in ways big and small. When the city council votes to return to Detroit as a water supply, it makes a strong statement: they are committed to continuing to spend money they don't have while continuing to ignore the real problem -- simple maintenance of the pipelines.
For its part, The State of Michigan will continue working with city leaders to establish a schedule for necessary fixes and long-term solutions that align with Flint's major needs and available dollars. The problem with the city's water supply did not happen overnight, and a real fix won't happen overnight, either.

I think my RPA is in my other sportcoat. Going to look for it now. …
b

From: Murray, David (GOV)
Sent: Monday, April 06, 2015 11:20 AM
To: Wurfel, Brad (DEQ)
Subject: RE: request for comment

I've been going back and forth with Ron this morning, asking if every Facebook post is now considered news and whether he will actually include a definition of what genocide is to people will know what he's actually accusing us of. He needs to start holding people accountable for their actions, rather than just cutting and pasting from Facebook.

That said, here's my RPA response, trying to point out that this is a long-standing city problem, and we are helping. I definitely don't want to go point for point with these guys. Think this works?

It's unfortunate that the councilman used such inflammatory rhetoric. The governor believes Flint residents need and deserve safe, clean water. The state continues working with city leaders to help

with their water infrastructure challenges, which were years in the making. That assistance includes $2 million in grants to help with leaks and other issues, which will allow the city to prioritize its repairs and help residents more quickly.

From: Wurfel, Brad (DEQ)
Sent: Monday, April 06, 2015 11:14 AM
To: Murray, David (GOV)
Subject: Re: request for comment

Still working through the near-literacy of the post itself, and laughing too hard to be meaningfully offended by the myriad factual errors and brazen political grab.

Notice the new media trend? Someone says something ridiculous, dumb or just inflammatory and it gets not only covered in the news pages but also the editorial department?? Ron is a good reporter who just sent you a note saying a group of journalism professionals met this morning and decided, consciously, to make news out of a flatly nutty Facebook post.
That is how I quit laughing at this.

Let me know if you need fact bullets or something. I'll do whatever you need done.
Thanks,
b

Sent from my iPhone

On Apr 6, 2015, at 9:50 AM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> Hi Brad,
>
> Just wanted you to see this. Incredible. I'll answer with our usual line about the state working with city leaders as the city works through its infrastructure problems, mentioning the grant and other things we've been doing.
>
> ---
>
> **From:** Ronald Fonger [redacted]
> **Sent:** Monday, April 06, 2015 9:22 AM
> **To:** Murray, David (GOV)
> **Subject:** request for comment
>
> Hey Dave:
> Just came out of our morning meeting and we've decided to write about the most recent Facebook comments of Flint Councilman Wantwaz Davis (who is also a candidate for mayor).
> The comments are similar to those made last month by the president of the Michigan chapter of Al Sharpton's National Action Network, who said Flint water is "almost as bad as gas chambers for Jews." (We spoke out against those comments editorially after covering it as a news story)
> Here is Davis' unedited comment, which includes his contention that the governor and emergency manager are "creating an obvious genocide against the residents of Flint."
> Thanks,
>
> Wantwaz Davis

18 hrs · Edited ·

It has become apparent to me that the emergency manager and Governor Rick Snyder is creating an obvious genocide against the residents in Flint, Michigan, who are forced to drink the contaminated, unhealthy water, that is going to commit an imminent danger to the lives of those who have a compromised immune system, and infants who biologically doesn't have a fully developed immune system. When I become mayor, I will certainly make the governor and all who took part in continuing to have the residents in Flint, Michigan exposed to this injustice and inexcusable danger accountable; this cannot carry on without someone becoming accountable and or responsible; It is so unfair that people in the future may contract a disease that will carry through the duration of their lives. The emergency manager is choosing finances and fixture of infrastructure, i.e., old pipes that hasn't been worked on for the past 60 to 70 years over lives and welfare of innocent civilians. Someone has to be charged with this neglect and imposition of danger amongst a helpless people; all of this is the effects of bad leadership. I must reiterate and can never say it enough, when I become mayor, which will be the best leader and or Chief administrator the City Of Flint, Michigan has ever chose. I will fight hard, not only against the unjust conditions we have long suffered from, but will make someone accountable for this genocide and address these unfortunate conditions around the nation and beg for the assistance of the Department of Justice (United States Attorney General's office) to do a through investigation, so in the end, if any one contracts a disease in the future, I would attempt to have them charged and brought to justice, including a civil suit, in the federal courts; someone has to be punished for the ills of the residents of Flint, Michigan. In conclusion, please vote August 4, 2015, for Wantwaz Davis for Mayor. Bad leadership and decision making has to come to an end at some point and time, and that will certainly be the day I am sworn in as your new mayor and Chief Administrator. This is a picture of reminder that in the past summer, I conducted 4 protest against the contaminated water and high water bills, I was telling people about the unhealthy water, before any notices came out to the public, attempting to keep these issues at the forefront, as mayor I will continue to fight even harder, these issues will not die until justice is brought to the people and someone is charged for this imminent genocide.

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email [redacted]
address 540 S. Saginaw St. #101, Flint MI 48502

From: Ronald Fonger [RFONGER1@mlive.com]
Sent: Wednesday, April 08, 2015 4:48 PM
To: Murray, David (GOV)
Subject: RE: flint water

That seems to be a part of the problem, but people don't remember having all the boil water advisories or citywide SDWA violation notices when we had Detroit water.
To answer the question though, yes, I've had city officials and consultants quoted many times on the pipes issue.
Thanks again for the responses Dave. Appreciate your help, and trying to keep to keep the coverage fair and square.

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Wednesday, April 08, 2015 3:58 PM
To: Ronald Fonger
Subject: RE: flint water

Thanks. That sounds like a big deal.

I haven't seen all the stories, but have you written that hooking up to Detroit water won't make a difference because the problem is pipes that have not been maintained for 40 years?

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, April 08, 2015 3:57 PM
To: Murray, David (GOV)
Subject: RE: flint water

Yes. They need a lesson in timing -- don't put out three press releases on one day with no advance warning.
I'm incorporating it as part of the response

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Wednesday, April 08, 2015 3:22 PM
To: Ronald Fonger
Subject: RE: flint water

Hi Ron,

Did you get the release today from the city about the new work being done to address the issues of discoloration and odor?

The state continues to support the city in its efforts to address the long-term issues associated with its water infrastructure, including the recent $2 million in grants and $2.24 million debt restructuring that will allow a variety of projects to help with odor and discoloration issues. Administration leaders have met with Concerned Pastors members and Gov. Snyder shares their belief that all Michigan residents deserve clean, safe water. We appreciate their passion in serving their congregation members and determination in helping all the people in their city.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, April 08, 2015 2:40 PM
To: Murray, David (GOV)
Subject: flint water

Hey Dave:
Seriously don't mean to constantly seeking comment, but here goes.
The Concerned Pastors for Social Action had a news conference at 1:30 p.m
It was well attended and all three TV stations were there as well.
Bottom line: Pastor Alfred Harris is again calling on the governor and the city to reconnect Flint water customers to the DWSD.
He's also said if no action is taken, there will be a meeting in one week at his church to discuss legal action to achieve the same end.
The pastors are not taking issue with the cost of renconnection but said Detroit remains the source of the best available water not withstanding the improved TTHM levels in the last round of testing.

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Muchmore, Dennis (GOV)
Sent: Friday, April 17, 2015 11:40 AM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Murray, David (GOV); Brown, Jessica (GOV)
Subject: RE: Flint SRF Letter

Geez, let's just forgive everyone's loans and make the Wurfel's pay for it.

From: Wurfel, Brad (DEQ)
Sent: Thursday, April 16, 2015 12:09 PM
To: Wurfel, Sara (GOV); Murray, David (GOV); Brown, Jessica (GOV)
Cc: Muchmore, Dennis (GOV)
Subject: FW: Flint SRF Letter

FYI, Letter from EPA's Susan Hedman to Cong. Kildee regarding his idea to forgive Flint's old SRF loans.

It's four pages, but here's the summary takeaway message:

No.

b

-----Original Message-----
From: Deamer, Eileen
Sent: Wednesday, April 15, 2015 5:52 PM
To: jordan.dickinson@mail.house.gov
Cc: Hovey, Amy; Beckmann, Ronna Erin; Fortin, Denise
Subject: Flint SRF Letter

Jordan -

Please find attached a copy of EPA's response to your March 26, 2015 letter regarding loan forgiveness and the City of Flint.

Thank you,

Eileen Deamer
[redacted]

From: Wurfel, Brad (DEQ)
Sent: Friday, July 10, 2015 12:37 PM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Cc: Wyant, Dan (DEQ); Tommasulo, Karen (DEQ); Pallone, Maggie (DEQ); Feuerstein, Heather (DEQ); Thelen, Mary Beth (DEQ); Murray, David (GOV); Brown, Jessica (GOV)
Subject: FW: here's the interim report

Heads up, I just did an interview with Michigan Radio (Lindsey Smith) regarding the lead issue in Flint.

Essentially, one of the residents complained to EPA about water quality in her home, and EPA's lead expert stopped by while he was in town to take some samples. He then completed a draft report and sent it – unvetted by Region V program brass – to the homeowner. That homeowner then leaked it to the ACLU, and the ACLU has been raising hell with it. There's a link to the draft below.

The situation is that Flint is now finishing a second round of statutorily required testing to determine whether the Ph of the Flint River water is causing a problem with lead and copper (popular water line material in old homes). The issue isn't lead in the source water, but in the premise plumbing. So far, tests on 100+ homes last year and another 100 this year are showing the city in compliance with lead and water, so we can say we're not seeing a problem, but we're only 70 % done processing the samples from January – December.

Thanks to Steve Busch for a great debrief on this yesterday afternoon.
b

From: Lindsey Smith [mailto:lmsmi@umich.edu]
Sent: Thursday, July 09, 2015 4:48 PM
To: Wurfel, Brad (DEQ)
Subject: here's the interim report

http://www.aclumich.org/sites/default/files/file/EPAWaterReport062415.pdf

--
Lindsey Smith
West Michigan Reporter
Michigan Radio
Office (616) 551-0717
michiganradio.org

From: Wurfel, Brad (DEQ)
Sent: Wednesday, July 22, 2015 10:21 PM
To: Wyant, Dan (DEQ)
Cc: Anderson, Madhu (DEQ); Pallone, Maggie (DEQ); Epkey, Amy (DEQ); McCauley, Sara (GOV)
Subject: Re: Flint

I'm not sure what Dennis is receiving. Is he referring to the EPA samples on one home?

As a requirement for the change in water supply sources, 100+ homes are picked and tested in each of two statutorily required sampling exercises. To meet the standard for lead and copper, 90% must pass each round. I believe three homes in the December tests were high, and of the 70 tests we had processed from the Jan - June testing, 5 were high. Busch seemed confident they will meet the standard.

We aren't talking about lead in the water supply here. We are talking about people with lead in their premise plumbing -- old lead connection pipes between their homes and the city pipes, folks with lead pipes in their homes, or folks with old copper pipes sweated together with lead solder.

The reason testing is done is to ensure that the Ph of the water is not reacting with lead in premise plumbing. If less than 10 percent of the served population is experiencing the problem, the system is in compliance with the federal standard.

What of the folks who test high? The city contacts them to let them know they have elevated levels and should get a plumber to check and replace their lead transmission hardware.

The ACLU's fear campaign on this issue is an embarrassment.

It would help perhaps to get a fresh briefing from Steve Busch with final numbers from the recent testing. And then maybe clarification about what the chief wants us to do. The options are not many.
b

Sent from my iPhone

On Jul 22, 2015, at 3:07 PM, Wyant, Dan (DEQ) <WyantD@michigan.gov> wrote:

> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
> **Date:** July 22, 2015 at 3:04:51 PM EDT

To: "Wyant, Dan (DEQ)" <WyantD@michigan.gov>
Cc: "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>
Subject: Flint

I'm frustrated by the water issue in Flint. I really don't think people are getting the benefit of the doubt. Now they are concerned and rightfully so about the lead level studies they are receiving from the DEQ samples. Can you take a moment out of your impossible schedule to personally take a look at this? These folks are scared and worried about the health impacts and they are basically getting blown off by us (as a state we're just not sympathizing with their plight).

From: Wurfel, Brad (DEQ)
Sent: Monday, August 17, 2015 2:47 PM
To: Muchmore, Dennis (GOV); Murray, David (GOV); Agen, Jarrod (GOV); Hollins, Harvey (GOV); Saxton, Thomas (Treasury)
Cc: Stanton, Terry A. (Treasury); Smith, Jennifer (DCH)
Subject: FW: Flint Lead Monitoring Letter
Attachments: City of Flint PbCu15 8_17_15.pdf

Heads up, here is a communication headed for Flint regarding lead & copper testing of their system and the need for 'optimizing' their treatment.

Good News: Based on two rounds of testing, they pass inspection for lead and copper.

Next News (there's no bad news here): They still need to provide a plan to optimize their treatment. This usually means adding phosphate to the water to minimize corrosion.

If you have questions, I'm happy to address them.
Thanks!
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Busch, Stephen (DEQ)
Sent: Monday, August 17, 2015 2:36 PM
To: Wurfel, Brad (DEQ)
Cc: Sygo, Jim (DEQ); Benzie, Richard (DEQ); Cook, Pat (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ); Pallone, Maggie (DEQ); Shekter Smith, Liane (DEQ)
Subject: Flint Lead Monitoring Letter

Brad,

As there has been much interest regarding lead related to Flint drinking water, I have attached our latest letter which covers the most recent January – June 2015 monitoring period. The City is in compliance with the 15 part per billion action level for lead. Yet based on these results, the treatment cannot be deemed to provide fully optimized corrosion control treatment, and the City will need to recommend additional treatment to achieve this optimization under the Lead and Copper Rule requirements established under the Michigan Safe Drinking Water Act. This is all spelled out in the attached letter.

If you have any questions or would like any additional information you may contact me at the number below.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator

Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

August 17, 2015

Mr. Brent Wright
City of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

Dear Mr. Wright:

SUBJECT: Flint, City of WSSN: 02310
Lead and Copper Monitoring of Drinking Water Taps

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), received your report for the monitoring period January 1, 2015, through June 30, 2015.

Action Levels	Results this monitoring period			
	90th Percentile	# of Samples Above Action Level	# of Samples Required	# of Samples Collected
Lead 15 parts per billion (ppb)	11 ppb	6	60	69
Copper 1.3 parts per million (ppm)	0.16 ppm	0	60	69

Ninety percent or more of the sites you tested are within action levels under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). These results must be reported on your 2015 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2016. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Flint is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.water.epa.gov/drink/info/lead.*

Recent changes to the Lead and Copper Rule (LCR) require the water supply to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice by three months after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit http://www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms under the Manuals, Forms and Brochures heading. Water supplies that fail to distribute the Consumer Notice of Lead Results must include the following statement in their CCR, "During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule."

While the City's LCR compliance monitoring has continued to meet action level requirements, the LCR also requires all large systems (those serving over 50,000 people) to optimize corrosion control regardless of their 90th percentile lead concentration. One way to demonstrate fully optimized corrosion control treatment is through two consecutive six month rounds of LCR compliance monitoring in which the difference between the 90th percentile level and the highest source water lead concentration is less than the Practical Quantitative Level for lead (0.005 milligrams per liter). Since the City did not meet these criteria in both the July – December 2014, and January – June 2015, sampling periods, the City must now recommend a treatment to fully optimize corrosion control treatment within six months in accordance with requirements under Act 399, Administrative Rule 604f (R 325.10604f). **This recommendation must be provided to our office as soon as possible, but no later than January 1, 2016**.

However, given the past use of phosphate treatment by the Detroit Water and Sewerage Department (DWSD) to fully optimize corrosion control treatment when the City was a wholesale customer of DWSD, the ODWMA recommends the City select this as its recommended treatment option, and begin implementation as soon as possible to address ongoing concerns by customers regarding lead levels within their premise plumbing systems. Under the second step of this Rule, the DEQ can specify optimal corrosion control treatment.

Our office will inform you when monitoring needs to be conducted as part of the optimization of the implemented corrosion control treatment. Customer requested samples for lead shall continue to be collected and analyzed. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Please contact me at 517-284-6644 or rosenthala@michigan.gov at your earliest convenience to discuss how the City will be complying with the above requirements.

Sincerely,

Adam Rosenthal, Environmental Quality Analyst
Lansing District Office
Office of Drinking Water and Municipal Assistance

cc: Mr. Michael Glasgow, City of Flint

From: Wurfel, Brad (DEQ)
Sent: Thursday, September 03, 2015 4:27 PM
To: Brown, Eric (GOV)
Cc: Muchmore, Dennis (GOV); Wurfel, Sara (GOV); Murray, David (GOV); Brown, Jessica (GOV)
Subject: RE: NEWS RELEASE: Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources
Attachments: Flint-TTHM-Compliance.pdf

Two things of note. Yesterday we sent this Return To Compliance letter to Flint RE total trihalomethanes.

Also, you might be asking about the optimization letter we sent a couple weeks ago. Thought I sent you that, tell me if I did not and I'll find it. This is the one where the testing indicates that they meet the standard for lead, but we still want them to optimize the system because they're a big system (anything over 50,000 customers) and thus need to optimize. This usually means adding phosphates.

Also, bonus, (see below) I issued this longish quote/statement to Flint Journal regarding lead (and used it for interviews today with NBC 25 and Michigan Radio's Steve Carmody.

Be advised I coordinated a very long interview with the Journal today, talking about lead, testing, optimizing, homeowner responsibilities, state responsibilities, and more. Hoping for better coverage tomorrow.

Let me know what else you need. Thanks, Eric.
b

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 02, 2015 3:28 PM
To: 'Ronald Fonger'
Subject: RE: lead in flint water

Here's a response from the DEQ. Attribute to me. Call me if you have further questions. Thanks, Ron.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels. We appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes or plumbing fixtures containing lead in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact. It's true whether you live in Detroit, Dowagiac or Decatur.

And in the City of Flint, that fact affects 15,000 or more residences.

However, we want to be very clear that the lead levels being detected in Flint drinking water are not coming from the treatment plant or the city's transmission lines. Treated water leaving the plant has no detectable levels of lead in it. The issue is how, whether, and to what extent the drinking water is interacting with lead plumbing in people's homes.

It does not appear the Virginia Tech research lab is certified, and we can't speak to the sampling methods being employed to achieve these results. The results reported so far fail to track with any of the lead sampling conducted by the city. In addition, the Virginia Tech results are not reflected by the blood lead level testing regularly conducted by the state department of community health that have not shown any change since Flint switched sources.

The state's compliance monitoring program requires the city to use certified laboratories and a standardized, federal testing protocol that looks specifically at the homes in communities most likely to experience lead problems. The latest results from Flint, obtained from two separate rounds of testing over the past year, indicated that Flint drinking water, meets state and federal safe drinking water standards for lead.

That said, the state has requested Flint to 'optimize' its water treatment to further limit exposure to lead from plumbing in homes. While statute allows several years for a drinking water system to actually undertake this process – Detroit took five years to complete its water optimization work – we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested at a certified laboratory and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils. However, I will say it again: when homes are fitted with lead plumbing or plumbing fixtures containing lead, homeowners should assume there is some varied level of interaction between water and pipes that results in lead exposure.
b

From: Brown, Eric (GOV)
Sent: Thursday, September 03, 2015 3:42 PM
To: Wurfel, Brad (DEQ)
Subject: FW: NEWS RELEASE: Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources

See below from Peters staff RE Flint water. Thanks!

From: Johnson, Bentley (Peters) [mailto:Bentley_Johnson@peters.senate.gov]
Sent: Thursday, September 03, 2015 3:41 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: NEWS RELEASE: Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources

Are you able to share the most recent correspondence from MDEQ to Flint regarding the lead in water issue? Corrosion etc? I think I mentioned in our meeting that EPA said that MDEQ recently sent a letter or something to Flint specifically on lead and/or corrosion. Thanks.

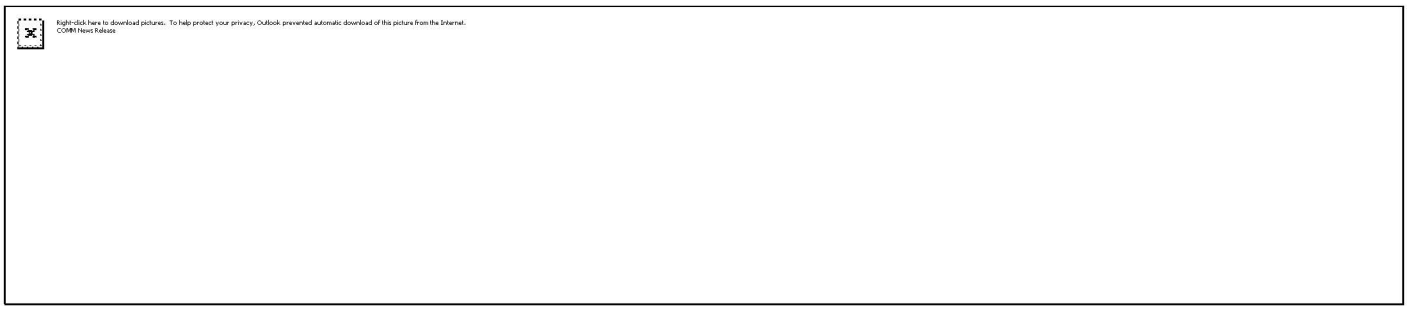
From: Johnson, Bentley (Peters)
Sent: Thursday, September 03, 2015 3:28 PM
To: 'Brown, Eric (GOV)' <BrownE15@michigan.gov>
Subject: RE: NEWS RELEASE: Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources

Thanks

From: Brown, Eric (GOV) [mailto:BrownE15@michigan.gov]
Sent: Thursday, September 03, 2015 3:22 PM
To: Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources

FYI

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Thursday, September 03, 2015 3:20 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources



Contacts:
Sara Wurfel or Dave Murray, Governor's Office
517-335-6397

FOR IMMEDIATE RELEASE
Thursday, Sept. 3, 2015

Brad Wurfel or Karen Tommasulo, MDEQ
517-284-6716

EDITOR'S NOTE: A signed copy of Executive Order 2015-12 is available here and a signed copy of the Line 5 agreement is available here.

Gov. Rick Snyder: Michigan Pipeline Safety Advisory Board will help protect Great Lakes, natural resources *Agreement reached*

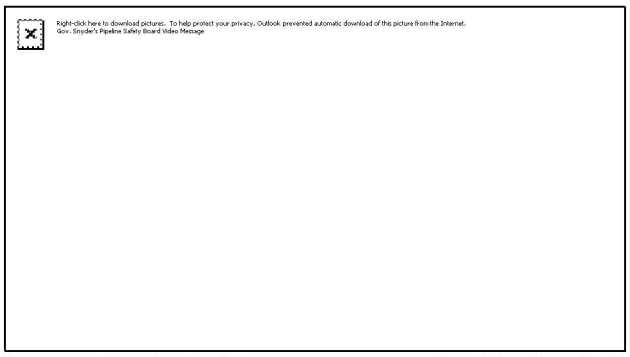
to ensure heavy crude will not pass through Mackinac Straits

LANSING, Mich. – Gov. Rick Snyder today issued an executive order creating the Michigan Pipeline Safety Advisory Board and announced an agreement with Enbridge Energy Co. to further preserve and protect Michigan's environment including our lakes, rivers and other world-class resources.

Executive Order 2015-12 establishes the 15-member board to ensure safety, upkeep and transparency of issues related to the state's network of pipelines. It will also be charged with advising state agencies on matters related to pipeline routing, construction, operation, and maintenance.

The board, consisting of industry, environmental and conservation representatives, cabinet members and members of the public was one of 13 recommendations included in the Michigan Petroleum Pipeline Task Force's July report and will be housed in the Michigan Department of Environmental Quality.

"While pipelines are an efficient way to deliver necessary energy to power our homes, our communities and our economy, pipeline spills also have negatively impacted our natural resources in the past," Snyder said. "We remain fully committed to protecting our Great Lakes and natural resources, and this board will be charged with continuing the important work of safeguarding our environment while ensuring safe, affordable and reliable energy."



Click above image to view Snyder's video message on the Pipeline Safety Advisory Board

In addition, the state and Enbridge Energy Co. today signed an agreement preventing the future passage of heavy crude oil through Enbridge's Line 5 pipelines running under the Straits of Mackinac. The agreement was signed by MDEQ Director Dan Wyant, Michigan Department of Natural Resources Director Keith Creagh and Attorney General Bill Schuette.

Additionally, the administration looks forward to working with the legislature this fall on a bill to increase civil fines in the event of an oil spill in Michigan.

Moving forward, the state continues to work on implementation of the 11 additional recommendations in the task force report.

Snyder appointed the following members to the new board:

Dan Wyant, director of the Department of Environmental Quality. Wyant will serve as a co-chair.

Valerie Brader, the executive director of the Michigan Agency of Energy. Brader will serve as a co-

chair.

Bill Schuette, Michigan Attorney General, or his designee.

Keith Creagh, director of the Michigan Department of Natural Resources, or his designee.

Col. Kriste Kibbey Etue, director of the Michigan State Police has designated Capt. Chris Kelenske, commander of the Michigan State Police, Emergency Management and Homeland Security Division.

John Quackenbush, chairperson of the Michigan Public Service Commission, or his designee.

Jerome Popiel, of Avon Lake, OH, assumed duties as Incident Management and Preparedness Advisor, Ninth Coast Guard District, in 2011. He is also co-chair of Regional Response Team (Region 5) and the Joint Response Team for the Canada and U. S. Great Lakes region. He is a 1992 graduate of the U. S. Coast Guard Academy. On behalf of the Rear Admiral June Ryan of the Ninth Coast Guard District, Popiel represents federal response and recovery agencies.

Jennifer McKay, of Petoskey, is the policy specialist for Tip of the Mitt Watershed Council. She serves on the Emmet County Local Emergency Planning Committee, Northern Michigan Area Committee, Healing Our Waters – Great Lakes Coalition Steering Committee, and the Bay Harbor Regional Stakeholder Group. McKay earned bachelor's degrees in environmental and political studies from Michigan State University. She represents environmental groups.

Michael Shriberg, of Ann Arbor, is Great Lakes regional executive director for the National Wildlife Federation. He previously served as education director at Graham Sustainability Institute and worked as a lecturer at the University of Michigan. Shriberg earned a bachelor's degree from Cornell University, and a master's degree and Ph.D. in environmental studies from the University of Michigan. He represents statewide conservation groups.

Brad Shamla, of Eden Prairie, MN, is vice president of U.S. operations at Enbridge Energy Co. and has been with the company for more than two decades. He is a licensed professional engineer and earned a bachelor's degree in civil engineering and a master's degree in business administration from the University of Minnesota. He represents pipeline operators.

Craig Pierson, of Bowling Green, OH, is president of Marathon Pipe Line LLC, where he has served as vice president of operations and as region manager for crude products pipelines in the Gulf Coast, Wyoming, and mid-south. He earned a bachelor's degree in mechanical engineering from Ohio Northern University. He represents the oil and gas industry.

Guy Meadows, of Hancock, is director of the Great Lakes Research Center and an adjunct professor in geological and mining engineering and sciences at Michigan Technological University. He earned a bachelor's degree and master's degree in mechanical engineering from Michigan State University, and a Ph.D. in marine science from Purdue University. He represents public universities

Christopher (Chris) Shepler, of Harbor Springs, is president of Shepler's Mackinac Island Ferry Service. He was appointed to the Citizens National Bank Board of Directors in 2014 and serves on the Mackinaw City Municipality as the chairman of the Downtown Development Authority. He studied economics at Ohio Wesleyan University and geography and marine affairs at the

University of Rhode Island. He represents the hospitality and tourism industry.

Jeffrey Pillon, of East Lansing, is director of Energy Assurance and Midwest Regional Coordinator for National Association of State Energy Officials (NASEO). He also served more than 36 years with the MPSC and State Energy Office. He has a special term appointment to Argonne National Laboratory, Infrastructure Assurance Center. Pillon earned a bachelor's degree from Michigan State University. He represents consultants with experience in pipeline operations and safety.

Robert (Craig) Hupp, of Grosse Pointe, is a member of Bodman PLC, and has represented clients in commercial, environmental, and local government litigation, specializing in complex, multi-party matters during his more than 32 years of law practice. Hupp earned a bachelor's degree in mechanical engineering from the University of Virginia, a graduate certificate and law degree from Wayne State University, and a master's in engineering from the University of New South Wales, Australia. He represents the general public.

Members will serve terms expiring Dec. 31, 2018. Their appointments are not subject to the advice and consent of the Senate.

#####

STAY CONNECTED:

This email was sent to browne15@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 2, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint – Department of Public Works
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: City of Flint – Water Supply
Return to Compliance Total Trihalomethanes (TTHM)
3rd Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint (City) has returned to compliance with the Michigan Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with Administrative Rule 610 (R 325.10610, *MCLs for disinfection byproducts*), the MCL for the disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L). Compliance is determined based on a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the LRAA all eight of the City's TTHM compliance sampling sites now comply with this standard based on the last four quarterly monitoring periods, ending August 31, 2015. This return to compliance regarding TTHM's began on September 1, 2015, and will continue as long as the LRAA at each of the City's TTHM compliance sampling sites remain below this standard.

TTHM Results (mg/L)						
	11/20/14	2/17/15	5/18/15	8/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	0.059	0.0162	0.0514	0.0755	0.050	0.055
DBP2 Liquor Palace 3302 South Dort Highway	0.033	0.0168	0.0635	0.0532	0.042	0.047
DBP3 North Flint Auto 6204 North Saginaw St.	0.041	0.0149	0.0452	0.0426	0.036	0.036
DBP4 University Market 2501 Flushing Road	**0.094**	0.0245	0.0598	0.0706	0.062	0.056
DBP5 Taco Bell 3606 Corunna Road	0.034	0.0151	0.0547	0.0619	0.042	0.049
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.054	0.0192	0.0605	0.0595	0.048	0.050
DBP7 Salem Housing 3216 MLK Boulevard	0.050	0.0285	0.0727	**0.0903**	0.060	0.070
DBP8 BP Gas Station 822 South Dort Highway	0.036	0.0199	0.0461	0.0549	0.039	0.044

Corrective measures by the City have been successful in achieving compliance with this standard. These measures have included replacement of anthracite filter media with granular activated carbon as well as the optimization of water treatment plant and distribution system processes and operations as recommended through Operational Evaluations conducted by the City. It is important that the City continue to follow these recommendations in order to limit disinfection byproduct formation and maintain compliance with the MCL LRAA standards. While the MCL LRAA standard has now been met at all eight compliance sampling sites, an individual TTHM concentration above 0.080 mg/L was measured at one location, DBP 7, during peak month sampling in August 2015.

The DEQ encourages the City to continue informing customers about this updated water quality information and compliance with the TTHM MCL standard.

If you have any questions regarding this letter, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality
Analyst
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glascow, City of Flint
Genesee County Health Department
Mr. Stephen Busch, DEQ

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 08, 2015 3:00 PM
To: Wurfel, Brad (DEQ); Murray, David (GOV); Brown, Jessica (GOV); Wurfel, Sara (GOV)
Subject: RE: flint water

Respond in kind...

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 8, 2015 2:24 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: FW: flint water

Mr. Edwards with Virginia Tech posted some pretty irresponsible stuff on his site today. The Flint Journal asked for our perspective.

We were holding off last week. That has officially ended.

Let me know if you have questions or concerns. Thanks!
b.

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 08, 2015 2:20 PM
To: 'Ronald Fonger'
Cc: Busch, Stephen (DEQ)
Subject: RE: flint water

Ron,

As we discussed last week, the state DEQ is just as perplexed by Edwards' results as he seems to be by the city's test results, which are done according to state and federal sampling guidelines and analyzed in certified labs.

When I said we were unsure how the Virginia Tech team got its results, that's not the same as being surprised that they got them. There are a conservatively estimated 15,000 old homes with lead plumbing in Flint alone, and this group specializes in looking for high lead problems. They pull that rabbit out of that hat everywhere they go. Nobody should be surprised when the rabbit comes out of the hat, even if they can't figure out how it is done.

It's scientifically probable a research team that specializes in looking for lead in water could have found it in Flint when the city was on its old water supply. We won't know that, because they've only just arrived in town and quickly proven the theory they set out to prove, and while the state appreciates academic participation in this discussion, offering broad, dire public health advice based on some quick testing could be seen as fanning political flames irresponsibly. Residents of Flint concerned about the health of their community don't need more of that.

As I mentioned last week, the issue here isn't Flint's water source or water plants. It's the high number of older homes with lead pipes and lead service connections. Anyone with lead plumbing in their homes should recognize there's some communication of lead from that.

The state and the EPA are working together in Flint -- have been from the start, and we are in regular communication with federal counterparts to discuss Flint water. The state's program has been in place, protecting community water supplies for more than 40 years around the state. The reason this conversation began is because we have lead and copper rules; the city met the state and federal standard, and has agreed to further optimize its system to even further reduce lead levels, but let's be clear: lead pipes means some lead in water, at some level. Folks who have concerns should get a water specialist to take a look at their home and see what they need to do to achieve peace of mind, because lead and copper are home plumbing problems that no water source can eliminate entirely.

b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Ronald Fonger [redacted]
Sent: Tuesday, September 08, 2015 11:39 AM
To: Wurfel, Brad (DEQ)
Subject: flint water

Brad:
This was posted by the Virginia Tech researchers this morning.
Since a part of it speaks directly to MDEQ's involvement in the Flint water situation, I wanted to see if we can get a comment from you for an initial story that I hope to post in about two hours.
Thanks,
http://flintwaterstudy.org/2015/09/our-sampling-of-252-low-risk-homes-demonstrates-a-high-lead-in-water-risk-flint-should-be-failing-to-meet-the-epa-lead-and-copper-rule/

Ron Fonger
MLive Media Group
Reporter

[redacted]
email [redacted]
address 540 S. Saginaw St. #101, Flint MI 48502

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 22, 2015 3:16 PM
To: Wurfel, Brad (DEQ); Murray, David (GOV); Wurfel, Sara (GOV); Wyant, Dan (DEQ)
Cc: Hollins, Harvey (GOV)
Subject: RE: DEQ Flint water docs

Should we ask one of our own Professors to comment on this article and the testing...

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 22, 2015 8:13 AM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: Fwd: DEQ Flint water docs

Some necessary info RE Flint. One is a Q&A we developed. Other is from DHHS -- spreadsheet on blood lead levels in kids.
Call me with questions. Thanks.

b

Brad Wurfel

Communications Director

Michigan Department of Environmental Quality

517-284-6713

[redacted]

From:	Lasher, Geralyn (DCH)
Sent:	Thursday, September 24, 2015 4:15 PM
To:	Muchmore, Dennis (GOV); Baird, Richard (GOV); Wurfel, Sara (GOV); Murray, David (GOV); Agen, Jarrod (GOV); Lyon, Nick (DCH); Clement, Elizabeth (GOV); Mcbride, Bill (GOV); Walsh, John (GOV); Hollins, Harvey (GOV); Wurfel, Brad (DEQ); Wyant, Dan (DEQ)
Cc:	Lyon, Nick (DCH); Hertel, Elizabeth (DCH); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH); Eisner, Jennifer (DCH); Minicuci, Angela (DCH)
Subject:	Updated MDHHS talking points, data
Attachments:	FINAL Flint Lead TP 092415.docx; BLLs in Flint v2.pptx; Flint Testing and EBLLs_updated 092315_with notes.pdf

Attached you will find a copy of our talking points as well as tables that outline our data on blood lead testing in children in Flint before and after the change in Flint's water.

While the chart is a bit cluttered with the different colored lines representing different years, in the bullet point narrative, you can see that our experts state that if the elevated blood lead levels were being driven by the change in water, we would expect the dark blue line to stay high rather than follow the seasonal pattern.

Thank you,
Geralyn

Blood Lead Levels in Flint Talking Points
September 24, 2015

- Promoting the health of our residents is a statewide priority – a priority that includes ensuring clean, safe drinking water for all residents and especially children.
- The results of the Hurley Children's Hospital are under review by the Michigan Department of Health and Human Services.
- The analysis that Hurley conducted is different from the way MDHHS has analyzed data regarding blood lead levels in Flint.
- MDHHS is looking to see if we can replicate the results of the Hurley study to see how they achieved their results.

MDHHS Blood Lead Testing Results in Flint

- MDDHS data shows a comprehensive look at the data since 2010, years before the change in Flint's water source occurred in April 2014.
- Each year shows a seasonal increase in childhood lead poisoning in the summer months, the highest seasonal increase of which occurred in 2010.
- If elevated blood lead levels were being driven by the change in water, we would expect to see the elevated levels remain high after the change in water source, rather than follow the seasonal pattern as they did by decreasing in the fall months.
- All data included in the MDHHS analysis were reported by laboratories directly to MDHHS, in accordance with State Law.

Differences in Analysis

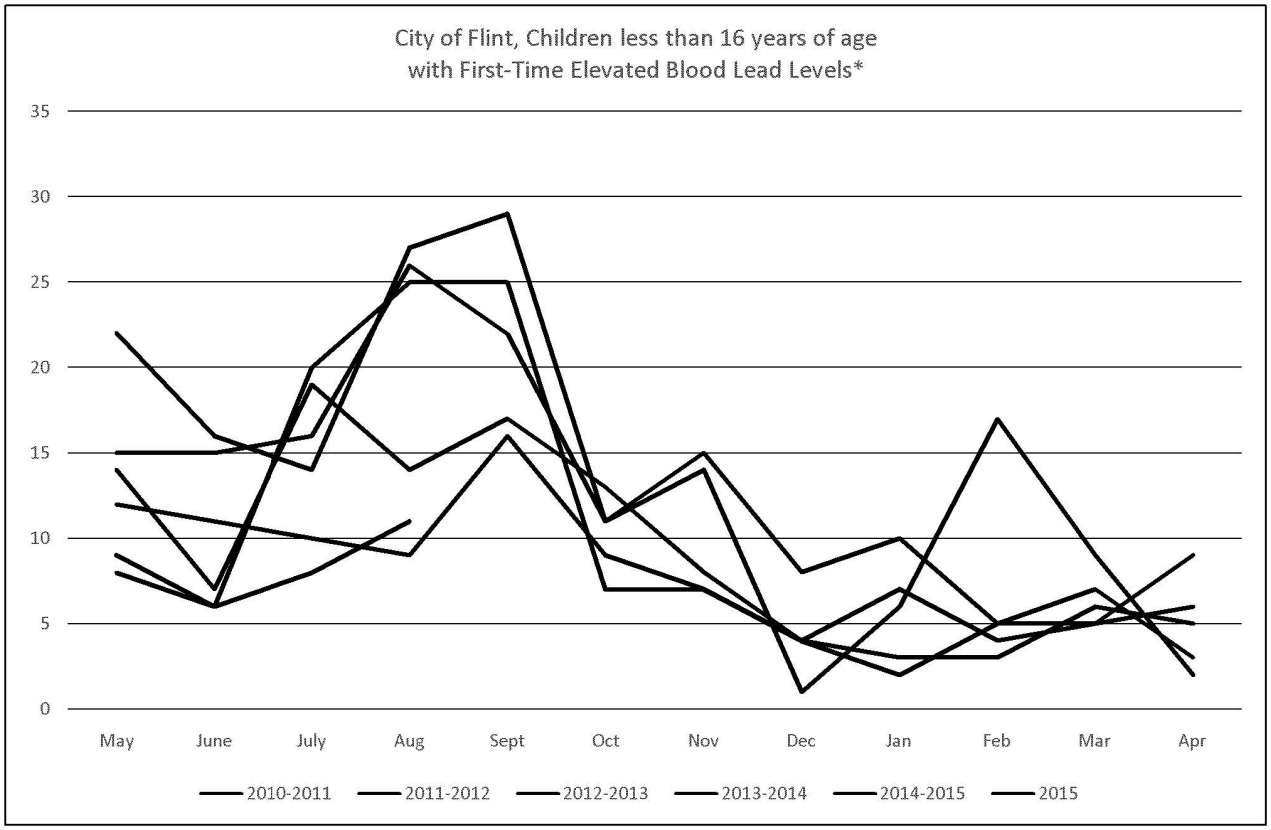
- MDHHS data provides a much more robust picture of the entire blood lead levels for the Flint area, and specifically, accounts for data over the full course of the past five years.
- Looking at the past five years as a whole provides a much more accurate look at the seasonal trends of lead in the area.
- Seasonal exposure is higher in the summer for a variety of reasons including children playing outside in the soil, and when windows are open and lead paint is more likely to be in the air. This seasonal increase would be unrelated to the water system.
- Our data includes children from the entire city, including all medical facilities, rather than just Hurley, has a larger age group of children, and includes a much larger sample size.
- The MDHHS analysis looks specifically at the first elevated blood lead level for each child, which provides an accurate picture of when first exposure occurred.
- The Hurley data includes a smaller sample size, much more limited time period (January-September of 2013 and 2015 only), and a smaller age group of children.

WIC Children

- In homes with infants on WIC, if the household has documentation from an official source of unsanitary water supply issues, that family may be eligible to receive ready-to-feed formula. Families should contact WIC to see if they are eligible.
- Each household would have to be looked at on an individual basis.
- WIC cannot cover bottled water.

Blood Lead Testing of Children in Flint, Before and After the Change in Flint's Water

- The change in Flint's water source occurred in April 2014. MDHHS looked at children's blood lead levels (BLL) before and after this event.
- The dark blue line (May 2014 – April 2015) and the green line (May-August 2015) reflect children's blood lead tests after the change. All other lines reflect tests before the change.
- An increase in childhood lead poisoning in summer (July, August, September) is typical throughout Michigan every year.
- While there is a dramatic difference between the numbers of elevated BLL in the summer before and after the event, a wider look that includes data back to 2010 shows that the year BEFORE the event (the yellow line) was more of an anomaly than the year after (the dark blue line).
- If elevated BLL were being driven by the change in water, we would expect the dark blue line to stay high rather than follow the seasonal pattern.
- All data included in this analysis were reported by laboratories directly to MDHHS, in accordance with State law.



*This graph includes:

Children whose address is listed as "Flint"--may not conform exactly to Flint city limits

Children less than 16 years of age at time of test

Only first-time blood lead levels >= 5 ug/dL

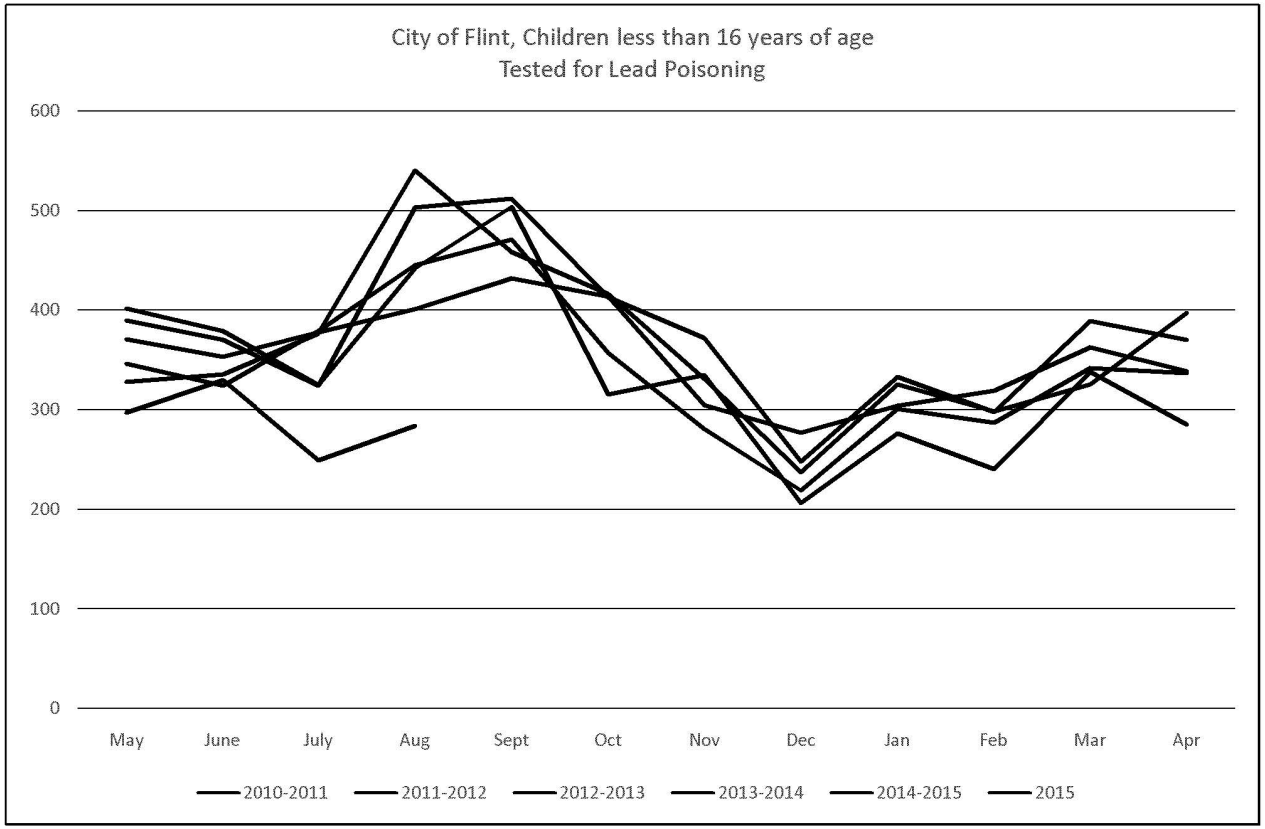
All first-time elevated levels, regardless of sample type (venous, capillary or unknown)

September 24, 2015

Source: MDHHS Data Warehouse, Lead Specimen table

Blood Lead Testing of Children in Flint, Before and After the Change in Flint's Water

- Blood lead testing (regardless of elevated levels) also tends to rise during late summer (August, September, October).
- This graph shows that testing in Flint has remained fairly steady over the last five years, except for a recent decline(May – August 2015).



*This graph includes:

Children whose address is listed as "Flint"--may not conform exactly to Flint city limits

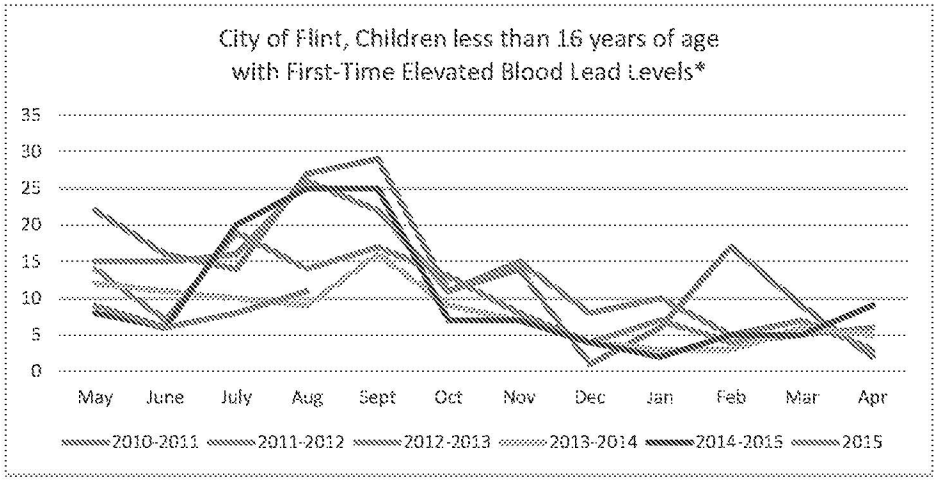
Children less than 16 years of age at time of test

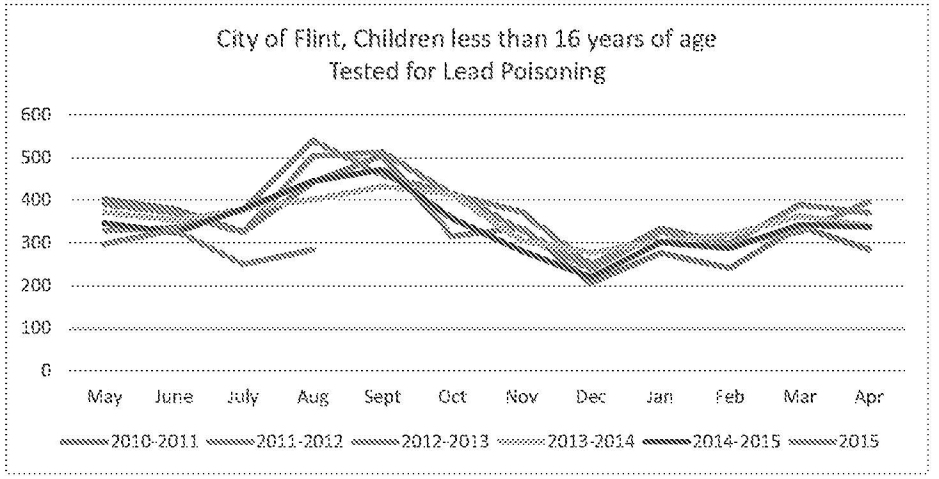
The number of children tested within each month.

Some children are tested more than once, and may be included in more than one month or year.

September 24, 2015

Source: MDHHS Data Warehouse, Lead Specimen table





	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2010-2011	22	16	14	27	29	11	14	1	6	17	9	2
2011-2012	15	15	16	26	22	11	15	8	10	5	7	3
2012-2013	14	7	19	14	17	13	8	4	7	4	5	6
2013-2014	12	11	10	9	16	9	7	4	3	3	6	5
2014-2015	8	6	20	25	25	7	7	4	2	5	5	9
2015	9	6	8	11								

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2010-2011	402	379	325	442	504	315	335	206	276	240	338	285
2011-2012	390	370	324	503	512	413	372	248	333	298	389	370
2012-2013	328	335	376	540	458	416	331	237	325	298	325	397
2013-2014	371	353	378	401	432	414	305	277	304	319	363	339
2014-2015	346	324	379	445	471	357	281	219	301	287	342	337
2015	297	330	249	284								

*Children whose address is listed as "Flint"--may not conform exactly to Flint city limits
Less than 16 years of age at time of test
Includes only first-time blood lead levels >= 5 ug/dL
Includes sample type of venous, capillary or unknown

September 23, 2015
Source: MDHHS Data Warehouse, Lead Specimen table

From: Heaton, Anna (GOV)
Sent: Thursday, October 01, 2015 11:05 PM
To: Wurfel, Sara (GOV)
Cc: Paciorek, Josh (GOV); Agen, Jarrod (GOV); Murray, David (GOV); Biehl, Laura (GOV)
Subject: Re: Mail with GoodReader attachments

Everything looks really solid - good job you guys.

My only suggestion would be to cite a source in the PR graph that says "The water leaving Flint's drinking water system is safe to drink" - according to whom/what test/when?

Sent from my iPad

On Oct 1, 2015, at 10:35 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Just realized that verb in last bullet got changed – it should not be "Creating" (much has already been created and done). This is "Ensuring" or "Boosting" or "Expanding"
>
> ---
>
> **From:** Paciorek, Josh (GOV)
> **Sent:** Thursday, October 01, 2015 9:17 PM
> **To:** Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
> **Cc:** Heaton, Anna (GOV) <HeatonA@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
> **Subject:** RE: Mail with GoodReader attachments
>
> Got it.
>
> Attached are revised versions.
>
> I'm going to send these to the printer now unless anyone has final changes.
>
> Thanks
>
> Josh
>
> ---
>
> **From:** Agen, Jarrod (GOV)
> **Sent:** Thursday, October 01, 2015 8:29 PM
> **To:** Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Paciorek, Josh (GOV) <Pacioreki@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
> **Cc:** Heaton, Anna (GOV) <HeatonA@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
> **Subject:** Fwd: Mail with GoodReader attachments
>
> See reorder from Gov.
> I would suggest we make similar reorder in press release (and talking points).
> Also - see his point on filters. Don't think that means we need to change handout, but maybe flesh that out more in press release.

Begin forwarded message:

From: "Snyder, Rick (GOV)" <[redacted]>
To: "Agen, Jarrod (GOV)" <Agenj@michigan.gov>
Cc: "Scott, Allison (GOV)" <scotta12@michigan.gov>
Subject: Mail with GoodReader attachments

Please consider a reordering as suggested below.

Also, we need to have good back up info on the question mark by the filters. For people on assistance is clear. Are we going to provide filters to anyone with a concern? Also, what is the timing of filter availability and how we will communicate more info?

Thanks
Rick

See files attached to this message (sent from GoodReader)

From: Agen, Jarrod (GOV)
Sent: Friday, October 02, 2015 3:06 PM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: Freep Editorial

I know Nancy probably doesn't care, but this is outrageous to place the entirety of this blame on the Governor. And she willingly or unwillingly is totally ignoring everything that was said this morning about the Flint River not being the issue. Are others understanding this point? I feel like Chad did on the call.

http://www.freep.com/story/opinion/editorials/2015/10/02/flint-vindication-----snyder-more-questions/73207200/

From: Agen, Jarrod (GOV)
Sent: Tuesday, October 06, 2015 10:49 AM
To: Emmitt, Beth (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: Flint

Don't forward or spread this around, but give me your take.
I think we may need to get G into Flint this week.
Unpublicized, but public. Filter distribution, testing visit, discussion with Superintendent, etc...
(And probably again next week.)

We should at least present the option of what a potential visit would look like.

Can you think about it and let me know how we'd do it.
I know it would require blowing up a day or part of a day.

From: Emmitt, Beth (GOV)
Sent: Tuesday, October 06, 2015 10:55 AM
To: Murray, David (GOV); Agen, Jarrod (GOV)
Cc: Wurfel, Sara (GOV)
Subject: RE: Flint

http://www.mlive.com/news/flint/index.ssf/2015/10/whats_next_for_water_filter_di.html

This Friday afternoon he could visit one of the sites, talk to the CEO of United Way.

-----Original Message-----
From: Murray, David (GOV)
Sent: Tuesday, October 06, 2015 10:53 AM
To: Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Cc: Emmitt, Beth (GOV) <emmittb@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>
Subject: Re: Flint

I think this is a good idea. One think we keep hearing is that the governor is not involved or is detached. The Mike Thompson cartoon in the Freep last week is getting a lot of mileage on social media.

This would be good to show he's there and cares. And if we don't announce until he's there we can avoid the protests -- and still get the optics.

Sent from my iPhone

> On Oct 6, 2015, at 10:49 AM, Agen, Jarrod (GOV) <AgenJ@michigan.gov> wrote:
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> Unpublicized, but public. Filter distribution, testing visit, discussion with Superintendent, etc...
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>
>

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:11 AM
To: Emmitt, Beth (GOV); Murray, David (GOV); Agen, Jarrod (GOV)
Subject: RE: Flint

Agreed overall, though ideally it would have been a week or two ago before the fever pitch level it is now. But we need to do something more to change the narrative and demontrate state's leadership and determination to help tackle the issue.

Key challenge is what specifically tied to kind of venue/announcement/info given the dynamics and timing (ie. school testing results) and status of DWSD reconnect conversation. Or a way to convey some other tangible item/assistance.

These filter distribution sites announced yesterday and that Beth highlighted below could be good one - it's a state led effort with collaboration - just would have to be done carefully.

We also have the state lab where testing is done. Though that poses certain opportunities and risks too, including it's not in Flint (is in Lansing).

-----Original Message-----
From: Emmitt, Beth (GOV)
Sent: Tuesday, October 06, 2015 10:55 AM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Cc: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Flint

http://www.mlive.com/news/flint/index.ssf/2015/10/whats_next_for_water_filter_di.html

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-----Original Message-----
From: Murray, David (GOV)
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Cc: Emmitt, Beth (GOV) <emmittb@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Re: Flint

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Sent from my iPhone

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> I know it would require blowing up a day or part of a day.
>
>

From: Heaton, Anna (GOV)
Sent: Thursday, October 08, 2015 9:02 AM
To: Murray, David (GOV)
Cc: Agen, Jarrod (GOV); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS); Eisner, Jennifer (DHHS); Hollins, Harvey (GOV); Tommasulo, Karen (DEQ); Kennedy, Jordan (GOV); Biehl, Laura (GOV)
Subject: Re: Updated press release with Harvey's edits

Sorry to weigh in so late. I would suggest replacing "protection" with "option" or "solution" in the headline, and then in the lede change "will be better protected" to "can count on reliable water service moving forward" -

I feel like the use of protection has certain negative implications - what are they being protected from? Evil Republicans? The state? The dirty water they have been drinking up until this point? Don't want it to get spun that way.

Sent from my iPhone

On Oct 7, 2015, at 9:53 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> Team,
>
> This new version incorporates Harvey's edits. Thanks, Harvey! We can add the quotes in the morning or later this evening.
>
> Dave

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation, city form partnership to fund switch until KWA is ready

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water until the Karegnondi Water Authority pipeline is completed, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation will donate $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous donation, and the dedication of all parties to come together to protect Flint families and children."

The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Flint city leaders requested the state's help to fund the reconnection after a Wednesday meeting of Flint's Technical Advisory Committee. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

INSERT MAYOR QUOTE HERE

The move to Detroit water, which is drawn from Lake Huron, carries many public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can sometimes be present in shallower rivers. Additionally, the Great Lakes Water Authority has already fully optimized its corrosion control, using phosphates to help coat the insides of pipes and prevent lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

INSERT MOTT FOUNDATION QUOTE HERE

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure.

Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation. At the Lippincott location only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.

Other good practices for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.

School test results released; more investigation planned

The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.

However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

<image001.jpg>

<151008 Flint water release_V3.docx>

From: Matt McLogan <[redacted]>
Sent: Thursday, October 08, 2015 12:39 PM
To: Murray, David (GOV)
Subject: RE: From the Lanthorn

Especially the editorial (they received no coaching from me, BTW -- hahah)

From one Flintstone to Another: will today's announcement settle down the Flint politics?

Matt

-----Original Message-----
From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Thursday, October 8, 2015 12:30 PM
To: Matt McLogan
Subject: Re: From the Lanthorn

The kids did a nice job!

Sent from my iPad

On Oct 8, 2015, at 12:24 PM, Matt McLogan <[redacted]> wrote:

When you have time and the subject is something other than water (!!!):

http://www.lanthorn.com/article/2015/10/gov-synder-speaks-at-state-university-summit

http://www.lanthorn.com/article/2015/10/editorial-oct-8-15

From: Matt McLogan <[redacted]
Sent: Thursday, October 08, 2015 12:47 PM
To: Murray, David (GOV)
Subject: Re: From the Lanthorn

Kildee for gov, Aninich for congress???

> On Oct 8, 2015, at 12:46 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:
>
> I think so. Frustrated by Rep Kildee who I think is saying things that they know to be untrue. Inflammatory.
>
> Sent from my iPhone
>
>> On Oct 8, 2015, at 12:39 PM, Matt McLogan <[redacted] wrote:
>>
>> Especially the editorial (they received no coaching from me, BTW -- hahah)
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>> When you have time and the subject is something other than water (!!!):
>>
>>
>> http://www.lanthorn.com/article/2015/10/gov-synder-speaks-at-state-university-summit
>>
>> http://www.lanthorn.com/article/2015/10/editorial-oct-8-15
>>
>>
>>
>>

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 20, 2015 8:32 AM
To: Baird, Richard (GOV); Saxton, Thomas (Treasury); Khouri, Nick (TREASURY); Stanton, Terry A. (Treasury); Workman, Wayne (TREASURY); Wurfel, Sara (GOV); Murray, David (GOV); Agen, Jarrod (GOV); Clement, Elizabeth (GOV)
Subject: RE: Earley Flint Water OpEd-FOR REVIEW AND INPUT

I know that no one is going to want to do this, but I don't feel that it is unfair for Darnell to set the record straight. This should be a decision for the G, Jarrod and Dan, however, my guess is that Darnell is not going to quietly accept the abuse of the Flint people without having his voice heard.

From: Michelle Zdrodowski [mailto:michelle.zdrodowski@detroitk12.org]
Sent: Monday, October 19, 2015 5:13 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Paul Conners <connersp@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; haddenf@michigan.gov
Cc: Darnell Earley <darnell.earley@detroitk12.org>; Kelly Rossman-McKinney <[redacted]>
Subject: Earley Flint Water OpEd-FOR REVIEW AND INPUT

All,

Darnell Earley asked that I send you the draft of an OpEd regarding the Flint Water issue that he would like to send to the media this week.

He is seeking your input before sending, and is looking for any feedback you might have by tomorrow afternoon. He has intentionally placed it on his EM letterhead as he is still acting in the capacity of an EM.

Thank you.

Michelle Z.

Michelle A. Zdrodowski
Executive Director of Communications
Detroit Public Schools
3011 W. Grand Boulevard, 14th Floor
Detroit, MI 48202
313.873.3238, office
[redacted]

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 20, 2015 1:44 PM
To: 'Michelle Zdrodowski'; Baird, Richard (GOV); Paul Conners; Saxton, Thomas (Treasury); Khouri, Nick (TREASURY); Stanton, Terry A. (Treasury); Workman, Wayne (TREASURY); Wurfel, Sara (GOV); Murray, David (GOV); haddenf@michigan.gov
Cc: Darnell Earley; Kelly Rossman-McKinney
Subject: RE: Earley Flint Water OpEd-FOR REVIEW AND INPUT

We think it is fine. Jarrod suggests strongly that you leave out the Ghandhi quote. We think it detracts from your overall message.

From: Michelle Zdrodowski [mailto:michelle.zdrodowski@detroitk12.org]
Sent: Monday, October 19, 2015 5:13 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Paul Conners <connersp@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; haddenf@michigan.gov
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Thank you.

Michelle Z.

Michelle A. Zdrodowski
Executive Director of Communications
Detroit Public Schools
3011 W. Grand Boulevard, 14th Floor
Detroit, MI 48202
313.873.3238, office
[redacted]

From:	Anderson, Madhu (DEQ)
Sent:	Tuesday, November 17, 2015 11:20 AM
To:	Ken Sikkema ([redacted]
Cc:	Agen, Jarrod (GOV); Baird, Richard (GOV); Muchmore, Dennis (GOV); Weber, Travis (GOV); Hollins, Harvey (GOV); Murray, David (GOV); Wurfel, Sara (GOV); Lyon, Nick (DHHS)
Subject:	Privileged Attorney-Client Communication - Outline of Flint Drinking Water Issues
Attachments:	DEQ's Outline of Flint Drinking Water Issues for Flint Water Task Force - Attorney Client Privilege Work Product -11-16-2015.pdf

Ken – Attached is the outline of the Flint Drinking Water issue (in a question and answer format) we have prepared for you to share with your colleagues on the Governor's Flint Water Task Force. Please let me know if we can provide any other material in preparation for the meeting tomorrow.

Madhu R. Anderson
Deputy Director, Economic and Strategic Initiatives
☎ 517 284 6702 [redacted]
✉ andersonm30@michigan.gov

City of Flint Drinking Water
Outline prepared by the
Michigan Department of Environmental Quality for the
Flint Water Task Force

I. INTRODUCTION

This document is intended to provide an overview of Michigan's implementation of the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), with respect to events in the city of Flint (City), Michigan.

II. BACKGROUND

1. How has Flint historically obtained its drinking water?

The water system in the City was organized and built under private ownership in 1883 as the Flint Water Works Company to pump raw water from the Flint River to their consumers. In 1903, the system was converted to a municipally-owned corporation which supplied drinking water to the City. In 1967, the City became a customer of the Detroit Water and Sewerage Department (DWSD) system.

After the switch to DWSD, the City operated its water treatment plant as a standby plant for purposes of reliability in the event of an emergency, such as an interruption in service of the single pipeline from DWSD. In the last ten years, the water treatment plant was used as an emergency backup during two weeks in 2009: June 18 through June 20 and September 10 through September 13.

As a backup emergency water treatment plant, the City was required to operate the water treatment plant quarterly to demonstrate the capability to produce drinking water in accordance with Act 399 and to keep mechanical equipment (such as valves, rubber seals, etc.) in good working order. Each quarter, the water treatment plant was test run and samples were taken of both raw water and finished water (post-filters). Since the water treatment plant was upgraded in the early 2000s, monitoring showed that the water treatment plant was performing as designed.

Contractual obligations with DWSD did not allow treated water to be put into the City's distribution system during these test runs. Treated water was discharged to the Flint River in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit. The test runs were for demonstration purposes, to keep the water treatment plant operational, and staff familiar with operation in the event it was needed in an emergency.

2. What State and Federal laws or rules exist to ensure safe drinking water is provided to City residents?

The federal Safe Drinking Water Act (federal SDWA) is the primary law that ensures the quality of Americans' drinking water. Under the federal SDWA, the United States Environmental Protection Agency (USEPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

The federal SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (The federal SDWA does not regulate private wells which serve fewer than 25 individuals.)

Originally, the federal SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

The most direct oversight of water systems is conducted by state drinking water programs. States can apply to the USEPA for "primacy," - the authority to implement the federal SDWA within their jurisdictions - if they will adopt standards at least as stringent as the USEPA's and enforce those standards. Michigan adopted the Safe Drinking Water Act in 1976 through Act 399 and has maintained primacy for the program since that time.

3. What is the USEPA's role as a regulatory agency in implementing the SDWA?

Federal and state governments share responsibility for administering drinking water programs. Under the federal SDWA, the USEPA is given the responsibility for developing national standards and regulations that apply to the nation's public drinking water systems and enforcing those standards, by working with states.

Michigan's drinking water program is evaluated annually by the USEPA for compliance with the federal SDWA. Based upon these evaluations, the USEPA continues to find Michigan's drinking water program to be compliant with the federal SDWA.

4. What is the Michigan Department of Environmental Quality's (DEQ) role as a regulatory agency in implementing the SDWA?

The federal SDWA permits states to accept oversight of the drinking water program under an agreement with the USEPA giving states primary enforcement responsibilities (or primacy). In addition to this delegation of federal authority to the states, states also have the power to create additional regulations and programs governing drinking water suppliers through their own legislative and regulatory processes. Michigan has had regulatory authority of public water supplies since 1913 (Waterworks and Sewerage Systems, 1913 PA 98).

The DEQ has been granted primary enforcement authority in Michigan for the federal SDWA under the authority of Act 399. As such, the DEQ, Office of Drinking Water and Municipal Assistance, has regulatory oversight for all public water supplies, including approximately 1,400 community water supplies and 10,000 noncommunity water supplies. A community water supply provides year-round service to 15 or more living units (homes, apartments, dorm rooms, etc.) or 25 or more residents. A noncommunity water supply has 15 or more service connections or serves 25 or more individuals on an average daily basis for not less than 60 days per year.

The DEQ engages in a variety of activities to help water systems remain in, or return to, compliance. These activities include: conducting surveillance visits (inspections) at water systems and reviewing facilities, equipment, and operations; requiring the submission of plans and specifications for waterworks system improvements and issuing construction permits; providing for the training, examination, certification and regulation of persons operating water supplies; helping systems incorporate preventive measures; and since 1996, providing financial assistance for system improvements.

5. What is the City's role in implementing the federal SDWA and Act 399?

State and federal programs develop regulations and perform oversight and compliance activities, but do not treat or deliver water to customers. At the local level, public and private water utilities collect, treat, and deliver drinking water to consumers in compliance with state and federal regulations.

The federal SDWA and Act 399 set up multiple barriers against contamination. These barriers include: source water protection, multiple treatment components, distribution system integrity, proper operations oversight, and public information. As the owner of a public water system, the City is responsible for knowing and following all requirements under Act 399, such as ensuring proper design, construction, operations and maintenance, so that contaminants in tap water do not exceed the standards established by law. The City treats the water, and must test its water routinely for specified contaminants and report the results to the DEQ. If a water system is not meeting these standards, it is the water supplier's responsibility to notify its customers.

The federal SDWA and Act 399 recognize that customers have the right to know what is in their drinking water and where it comes from. The City, like all water suppliers, must notify consumers when there is a problem with water quality.

The City submits samples of its water for laboratory testing (monitoring) to verify the water it provides to residents meets all federal and state standards. How often and where samples are taken varies from system to system and from contaminant to contaminant. The DEQ provides an annual monitoring schedule to the City setting forth these requirements.

In addition, the City is required to employ properly certified water operators that are trained and experienced to operate the treatment and distribution systems associated with the City's water system.

6. What approvals were needed from the DEQ in order for the City to begin using its water treatment plant full time?

The City had long ago been issued construction permits for raw water pumps to withdraw water from the Flint River and the City was grandfathered under the water withdrawal program (Part 327, Great Lakes Preservation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended), as were all existing community public water systems at that time. There were no additional DEQ

permissions or authorizations required under Act 399 because the City already had approval to use the water treatment plant.

Under Act 399, there are no licenses or permits required to operate public water systems. The City did apply for and obtained two construction permits prior to the water treatment plant changing from an emergency backup plant to full-time operation. These permits were for new chemical feed equipment, changes to the electrical service, etc.

III. THE FLINT RIVER – IS IT A SAFE SOURCE OF DRINKING WATER?

Seventy-five percent of Michigan's population served by a public water supply receive their drinking water from surface water sources, the majority of which is withdrawn from the Great Lakes. However, several public water supplies in Michigan utilize water from inland rivers. All surface water sources require significant treatment in order to be safe for consumption.

While all surface water sources must receive a high level of treatment, inland river sources present a greater challenge than water withdrawn from one of the Great Lakes because of rapidly changing water quality conditions. Under most circumstances, rivers are prone to greater fluctuations in temperature, have higher amounts of organic material, greater turbidity (suspended solids), and are more vulnerable to microbiological and viral contamination than Lakes Huron, Erie, Michigan or Superior. While the water chemistry in the Flint River differs from that in Lake Huron, it can still be treated in accordance with the federal SDWA and Act 399. The waterworks industry has the technology to treat wide ranging source waters to provide potable and palatable drinking water, including direct reuse of treated wastewater. Regardless of source water quality, all public water systems must comply with the same drinking water standards in the finished water.

It is not the source water that reacts with the homeowners plumbing in the distribution system, but rather the finished water quality that is important. Treated water leaving the City's water treatment plant does not contain lead. In addition, the treatment process employed by the City includes lime softening to reduce the hardness in the river water. The City includes lime softening and pH adjustment primarily to improve aesthetic water quality associated with hardness. Lime softening is not a process that water supply professionals would expect to increase corrosivity of water. The City, however, does practice recarbonation to readjust pH at the end of the softening process.

pH levels of finished water leaving the City's water treatment plant averaged 7.7. Expanded water monitoring conducted quarterly at 25 sample sites located throughout the distribution system showed the following:

July – September 2014	average pH = 7.71	range: 7.56 – 7.86
October – December 2014	average pH = 7.88	range: 7.62 – 8.10
January – March 2015	average pH = 7.81	range: 7.60 – 7.99
April – June 2015	average pH = 7.63	range: 7.48 – 7.80

The data below was obtained at ten of the sampling locations throughout the City's distribution system, while they were still purchasing water from DWSD before the City switched to the Flint River as a source:

January – March 2014 (DWSD)	average pH = 7.47	range: 7.40 – 7.54
April 2014 (DWSD)	average pH = 7.49	range: 7.42 – 7.59

Note that the pH of the treated water produced while the City was using the Flint River did not differ significantly from pH values seen in the distribution system during the time the City purchased water from DWSD. Thus, pH monitoring provided no indication of a change in water corrosivity.

IV. *E. COLI* AND TOTAL COLIFORM BACTERIA VIOLATIONS

1. What caused the *E. coli* and total coliform bacteria violations experienced by the City in August and September 2014?

A number of factors, primarily related to distribution system operation and maintenance, likely contributed to the Boil Water Advisories in the City during August and September 2014 triggered by exceedances of bacteria standards in limited areas of the distribution system. In addition, the coliform detections were confined to less than 20 percent of the water system. Had the detections been the result of a failure in treatment, detections would have been expected throughout the City rather than in such a limited geographic area.

Instead, the violations seem to have been caused by other factors such as aging infrastructure. The City's water distribution system has suffered from a lack of infrastructure investment and asset management. Most of the City's over 550 miles of water mains are now over 75 years old, and constructed of unlined cast iron piping. This cast iron pipe is subject to tuberculation, which thins and weakens the pipe walls in some areas and causes a buildup of sediment and debris on the pipe walls in other areas. Tuberculation can lead to water quality issues as well as reduced flows and pressures. Tuberculation also encourages the development of biofilms. Biofilm growth may occur more frequently in areas where little or no disinfectant is maintained.

The City has also experienced decades of a declining customer base and water use, with vacant homes, commercial businesses, and industrial property. Declining water use leads to excess residence time (water age) within the City's distribution pipes and water storage facilities, accelerating tuberculation, biofilm growth, and reductions of disinfectant concentration in the distribution system. While the City has recently seen an infusion of funding for blight removal, contractors using fire hydrants to complete this work have been known to cause hydraulic disturbances that dislodge and suspend settled debris, which may contribute to the bacterial contamination. These hydraulic disturbances were also believed to be a source of the aesthetic water quality complaints both the City and the DEQ were receiving.

The winter of 2013-2014 was also one of the coldest experienced by the water system. The City, which historically has unaccounted water losses of over 30 percent, saw even greater losses since February 2014 due to an increase in cold weather-related water main breaks and leaks (City personnel reported 400 water

main breaks in calendar year 2014, with greater than 50 percent in the winter quarter). The City has also been lacking a formal maintenance program for its more than 7,250 valves, which are critical in limiting the areas impacted during water main repairs. As an example, two valves on the transmission line used to supply the area of the 2014 Boil Water Advisories were found to be closed during the City's investigation of possible sources, causing much longer residence times, reduced disinfectant concentrations, and reduced pressures – all potential avenues for contamination to enter a distribution system.

The Boil Water Advisories also occurred during the warmest and relatively wet periods of August and September 2014. Warm weather conditions are not only more conducive to bacterial growth but also degrade disinfectant concentrations more quickly. As already explained, longer residence times, biofilms, and tuberculation contribute to lowered disinfectant concentrations. Warm, wet weather conditions also allow water contaminated with bacteria to accumulate or pond around piping that leaks and breaks.

During the summer of 2014, the City was actively repairing the distribution system (City personnel reported 29 water main breaks in June through August 2014). After the switch to the Flint River, it was discovered that there were many broken or closed valves in the distribution system (City personnel reported 120 broken valves and 239 valves in an improper position). As the City began correcting these problems, they did detect the presence of coliform organisms in the distribution system in testing conducted as a result of the repairs. This sporadic detection is not an unusual occurrence. Many communities have experienced similar issues when significant repairs are made in the system and/or they suffer water main breaks and localized pressure losses.

2. How were the violations detected? What was the DEQ's response?

Federal SDWA regulations regarding monitoring and standards for bacteria in water distribution systems are incorporated into Act 399. There are a variety of bacteria, parasites, and viruses which can potentially cause health problems if humans ingest them in drinking water. Testing water for each of these potential pathogens would be difficult and expensive. Instead, community water systems are required to test monthly for total coliform and *E. coli*. Total coliform bacteria, while not pathogenic, often originate from the same sources as many pathogens. Therefore, the presence of total coliform in drinking water indicates there may be a pathway for pathogens or other contaminants to enter the system. The absence of total coliforms in the distribution system indicates a minimal likelihood that pathogens are present. *E. coli* is itself a pathogen and its detection is considered direct evidence of a health risk.

The Boil Water Advisories which occurred in the City were associated with bacteria monitoring detections and violations of bacteria standards. These advisories were issued by the City after consultation with the DEQ.

Upon receiving information indicating total coliform and *E. coli* bacteria had been detected, the DEQ advised the City to issue a Boil Water Advisory from August 15 through 20, 2014, for the affected portion of the City. Another Boil Water Advisory was issued from September 5 through 9, 2014, due to localized detections of total

coliform bacteria in the same and adjacent portions of the City. The advisories covered an area of less than 20 percent of the water department's service area.

Once a Boil Water Advisory has been issued, time is needed to investigate potential causes and implement corrective measures. The larger the water system, the more time this may take. Once corrective measures have been taken, samples must be collected and analyzed to confirm that bacteria are no longer present. Under approved analytical methods used by the City, samples must be incubated for 24 hours before results can be obtained. In situations where the bacterial contamination has been confirmed, two consecutive rounds of safe samples collected at least 24 hours apart are normally obtained before canceling a Boil Water Advisory. Adding each of these steps together, a normal response period to rescind a Boil Water Advisory under these circumstances would be expected to take 3 to 4 days.

V. TOTAL TRIHALOMETHANES (TTHM) VIOLATIONS

1. What caused the TTHM violations experienced by the City beginning in late summer 2014?

Disinfectants are an essential element of drinking water treatment because of the barrier they provide against waterborne disease-causing microorganisms. However, disinfection byproducts form when disinfectants used to treat drinking water react with naturally occurring organic materials in the water (e.g., decomposing plant material). The formation of disinfection byproducts continues to occur as water travels throughout water distribution systems.

A major challenge for water suppliers is how to provide protection from pathogens while simultaneously minimizing health risks to the population from disinfection byproducts. Total Trihalomethanes (TTHM – chloroform, bromoform, bromodichloromethane, and dibromochloromethane) and halogenated acetic acids (HAA5 – monochloro-, dichloro-, trichloro-, monobromo-, dibromo-) are widely occurring classes of disinfection byproducts. The amount of TTHM and HAA5 in drinking water can change depending on the season, water temperature, amount of chlorine added, the amount of plant material in the water, and a variety of other factors. All community water systems that chemically disinfect or purchase water that has been chemically disinfected are required to monitor for disinfection byproducts.

The Flint River has higher levels of organic material than water in the Great Lakes and as a result, the water produced by the City developed higher disinfection byproducts than the water purchased from DWSD. Because the water treatment plant was previously operating intermittently, it was not possible to predict disinfection byproduct levels at distribution system compliance points until the City began relying on its water treatment plant continuously.

As mentioned previously, the City became aware that there were numerous broken valves and closed valves that should have been open in the distribution system. At that time, the City also began a mapping effort to identify "water age" in the distribution system. The longer the residence time or "water age" the greater the opportunity for the formation of disinfection byproducts.

2. How were the violations detected? What was the DEQ's response?

Disinfection byproducts are monitored at eight sites throughout the distribution system. A locational running annual average is calculated for each individual site. Because TTHM and HAA5 maximum contaminant levels are calculated based on a running annual average at specific distribution system locations, the actual violation of the standard did not occur until the fall of 2014. However, because it was apparent in the summer of 2014 that the standard would eventually be exceeded; the DEQ asked the City to proactively implement measures to address the problem before the violation required them to do so.

As a result of maintenance efforts undertaken by the City to repair valves and correct improperly closed valves, the City was able to improve water flow in the distribution system and thereby reduce residence time or "water age" in the system. Operational changes made to reduce the amount of storage in the system also helped reduce residence time which contributed to a reduction in disinfection byproduct formation.

In addition to operational changes to minimize residence time in the distribution system, the City added granular activated carbon to its filters in July 2015. Levels of TTHMs and HAA5s were reduced and the City returned to compliance on September 1, 2015.

VI. THE TASTE, ODOR, AND COLOR COMPLAINTS RECEIVED BY FLINT

1. What caused the taste, odor, and color complaints received by the City from residents?

Taste, odor, and color issues are very personalized. While water leaving the water treatment plant did not have any unusual taste, odor or color; during the summer after the switch to the Flint River, customer complaints increased. Construction in the distribution system, hydrant flushing, and changes in flow characteristics are all known causes of disturbances within the distribution system that can cause an increase in taste, odor, and color complaints. Aesthetics, such as taste, odor, and color, while a concern, by themselves are not a threat to public health.

2. What was the DEQ's response?

The DEQ consulted with the City regarding these complaints. The City indicated that they were offering to investigate such complaints for anyone that had issues; but City personnel informed the DEQ that they were not able to recreate these situations in the field. In addition, as a result of the repair work that was underway and the increased flushing to reduce water age in the system to help control TTHMs, it was anticipated that there would be short-term disturbances in the system that would cause color and odor complaints. All water supplies are advised to provide notice to residents prior to undertaking a flushing program because flushing (even routine flushing) often causes temporary problems as described. Based on information from City personnel, it appeared that the complaints were related to such operational activities occurring in the distribution system.

VII. LEAD ISSUES IN THE FLINT DRINKING WATER

1. What causes lead in drinking water?

Lead is rarely found in source water. Lead enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead fixtures and solder. Older homes built prior to World War II are more likely to contain lead pipes. The most common problem with newer construction is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water. The amount of lead in tap water also depends on the types and amounts of minerals in the water, how long the water stays in the pipes, the amount of wear in the pipes, the pH of the water, and its temperature.

2. What is the Lead and Copper Rule?

On June 7, 1991, the USEPA published a regulation to control lead and copper in drinking water. This regulation is known as the Lead and Copper Rule (also referred to as the LCR). The treatment technique for the rule requires systems to monitor drinking water at customer taps. If the 90th percentile for lead exceeds an action level of 15 parts per billion (ppb) or the 90th percentile for copper exceeds an action level of 1.3 parts per million (ppm), the system must undertake a number of additional actions to control corrosion. If the action level for lead is exceeded, the water supply must also inform the public about steps they should take to protect their health and the water supply may have to replace lead service lines under their control.

3. What is the lead action level?

For most contaminants, the USEPA sets an enforceable regulation called a maximum contaminant level based on the maximum contaminant level goal. Maximum contaminant levels are set as close to the maximum contaminant level goals as possible, considering cost, benefits, and the ability of public water systems to detect and remove contaminants at the water treatment plant using suitable treatment technologies. Because lead contamination of drinking water often results from corrosion of the plumbing materials belonging to water system customers, the USEPA established a treatment technique rather than a maximum contaminant level for lead. A treatment technique is an enforceable procedure or level of technological performance which water systems must follow to control a contaminant. Although the maximum contaminant level goal for lead is zero, based upon the above factors, the USEPA has established the action level for lead at 15 ppb.

The treatment technique regulation for lead requires water systems that produce drinking water to control the corrosivity of the water. The regulation also requires systems to collect customer tap samples from sites served by the system that are more likely to have plumbing materials containing lead. If the 90th percentile action level for lead is exceeded, then water systems are required to take additional actions including:

- Optimizing corrosion control treatment (for water systems serving greater than 50,000 people that have not fully optimized corrosion control).

- Educating the public about lead in drinking water and actions consumers can take to reduce their exposure to lead.
- Replacing the portions of lead service lines (lines that connect distribution mains to customers) under the water system's control.

4. Did DWSD have optimized corrosion control treatment?

After the LCR passed in 1991, DWSD and all of its consecutive customer systems conducted two rounds of monitoring for lead and copper. Copper levels were well below action level limits, but lead levels exceeded the action level of 15 ppb for DWSD and many of its customer communities. As a result, DWSD installed corrosion control treatment. DWSD performed a corrosion control study and concluded that they could reduce the corrosivity of the water by the addition of an orthophosphate, a corrosion inhibitor.

5. Did the DEQ require the City to have corrosion control in place when it switched to the Flint River as its source of drinking water?

No. There are two ways under the LCR to deem a water supply as providing "optimal corrosion control" – either by sampling and determining through a calculation that the supply is "optimal" or by installing treatment if it is needed. The DEQ requested that the City perform two 6-month rounds of monitoring to demonstrate if the City was practicing optimal corrosion control treatment. According to state regulations [R325.10604f(2)(b)(iii)], a system can demonstrate optimized corrosion controls by sampling in two, consecutive 6-month monitoring periods and comparing the results of this monitoring to the lead level in the source. Optimal corrosion control under this scenario would be defined as having the 90th percentile in each of these monitoring periods lower than the sum of the lead in the source and the practical quantification limit for lead of 5 ppb. Since the source water has 0 ppb lead, the City would have been deemed optimal if its 90th percentile of lead was 5 ppb or less in these two consecutive periods. However, once a system has installed treatment, it would also be considered optimized regardless of the 90th percentile level achieved, as long as it does not exceed the action level of 15 ppb.

In this case, the City had been purchasing water from DWSD that was treated for corrosion control. It was the DWSD water system that was considered as having optimized corrosion control at that point. Since the City water system had not been the supplier of water before, the DEQ did not require the City to maintain corrosion control for which it was not responsible [R325.10604f(2)(b)]. It could not "maintain" operations undertaken elsewhere by a different entity for a different source of water. The DEQ's instructions to the City were consistent with past practices afforded to all other large water systems. At the beginning of the LCR, all large systems were initially granted the option to demonstrate optimal corrosion control treatment through full-scale monitoring under the applicable rules. For these reasons, two 6-month rounds of monitoring, as required by the LCR, were the required means to determine whether or not optimal corrosion control was being achieved.

6. How does the DEQ calculate the 90th percentile?

To determine the 90th percentile of a list of lead or copper results, the procedure below is followed:

Step 1: Place lead or copper results in ascending order
Step 2: Assign each sample a number, 1 for lowest value
Step 3: Multiply the total number of samples by 0.9 – this yields the 90th percentile sample. For example: 20 samples x 0.9 = 18th sample. This is the 90th percentile level.

Calculating the 90th percentile is easiest when a supply collects 10 samples (or a multiple of 10). Note that the 90th percentile must be interpolated if the number of samples is not a multiple of 10.

7. What was the result of the first round of monitoring conducted by the City?

The first 6-month round of lead and copper monitoring conducted by the City ended on December 31, 2014. One hundred samples were submitted and the 90th percentile lead level was calculated to be 6 ppb. The next step required by the DEQ was for the City to collect a second round of monitoring.

8. What was the result of the second round of monitoring conducted by the City?

The second 6-month round of lead and copper monitoring conducted by the City ended on June 30, 2015. Sixty-nine samples that complied with the site selection criteria were submitted and the 90th percentile lead level was calculated to be 11 ppb. The conclusion from these results was that the City, while in compliance with the action level, exceeded the level required to be deemed as having optimized corrosion control.

9. Why was the City required to collect 100 compliance samples for lead and copper in the first 6-month monitoring period of July through December of 2014 and then only 60 compliance samples in the second 6-month period of January through June of 2015?

The number of compliance samples required for lead and copper is based upon the population served by the water system as identified in the table below, taken from Rule 325.10710a of Act 399.

Supply Size (Number of People Served)	Number of Sites (Standard Monitoring)	Number of Sites (Reduced Monitoring)
More than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Fewer than 101	5	5

The number of samples the City was required to collect in the first round of monitoring after they began relying on the Flint River was based on the 2010 census, which listed the City's population as more than 100,000 residents. In March of 2015, the City provided updated information that indicated the City's population had decreased to less than 100,000. Therefore, they were only required to collect 60 samples. There is no rule prohibiting the collection of additional compliance samples – only establishing a minimum number necessary.

10. What actions did the DEQ order the City to undertake after the second round of monitoring?

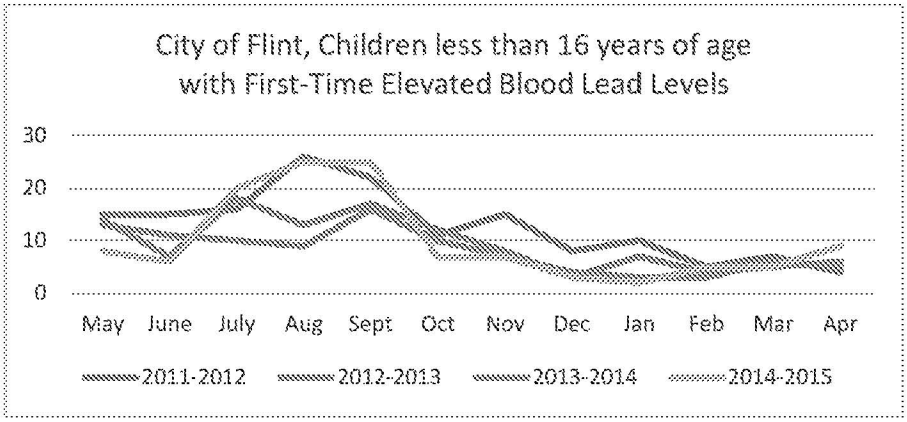
While the City's LCR compliance monitoring continued to meet action level requirements, the City exceeded the level required to be deemed as having optimized corrosion control. Following receipt of the City's compliance monitoring results, the DEQ sent a letter on August 17, 2015, requiring the City to install corrosion control treatment.

Under the LCR, the City has 6 months to let the DEQ know whether it intends to conduct a study, then 18 months to perform the study and make its recommendation, and 24 months to complete installation of the selected corrosion control. The DEQ requested the City accelerate this schedule. The City submitted plans and specifications to install corrosion control treatment and a construction permit was issued by the DEQ on October 28, 2015. The City is in the process of installing the necessary equipment and procuring the appropriate chemicals. Treatment is expected to be on-line by the end of November 2015. As of October 16, 2015, the City resumed purchasing water from DWSD that is already optimized and provides a corrosion inhibitor. The additional treatment by the City will further enhance the amount of inhibitor in the system.

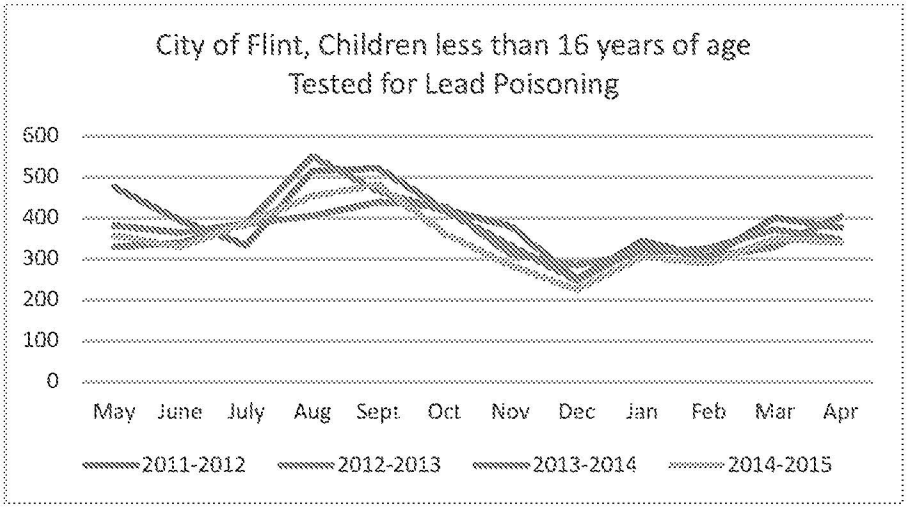
11. What had Michigan Department of Health and Human Services (DHHS) advised the DEQ regarding blood lead levels prior to the DEQ ordering the City to implement optimized corrosion control?

In an e-mail dated July 28, 2015, regarding blood lead testing, the Michigan DHHS indicated that they:

> "…compared lead testing rates and lead testing results to the same time frame for the previous 3 years, to see if there were any patterns that suggested that there were increased rates of lead poisoning after the water supply was switched. Per the attached charts –
>
> • Lead testing rates remained about the same from year-to-year…



- There was a spike in elevated blood lead tests from July-September 2014…



- However, that pattern was not terribly different from what we saw in the previous three years; especially in 2011-2012 (we are working with our Epidemiologist to statistically verify any significant differences).

- We commonly see a 'seasonal effect' with lead, related to people opening and closing windows more often in the summer, which disturbs old deteriorating paint on the windows, sills and sashes. Window fans frequently blow and spread the lead dust from the deteriorating paint to other parts of the room/house. We suspected that the summer data spike may be related to this effect.

- If the home water supply lines and/or river water were contributing to elevated blood lead tests, we expected that the increased rates would extend beyond the summer, but they drop quite a bit from September to October, stayed low over the winter, and are just starting to tail up again in the spring of 2015."

This e-mail from DHHS in concert with the completion of two 6-month rounds of lead compliance sampling data indicating that the City had not exceeded an action level for lead provided the basis for the DEQ to maintain that the water in the City continued to be in compliance with the federal SDWA and Act 399.

12. When did the DEQ first become aware of allegations of elevated blood levels being detected in certain children?

The DEQ was notified on August 23, 2015, by a professor from Virginia Tech that "over the next few months we will be studying Flint water quality issues…" Results indicating elevated lead levels in homes were reported as part of this study in late August. In September 2015, information was reported in news articles that

pediatricians in the City had data suggesting an increase in children's blood lead levels in two zip codes in the Flint area.

Prior to these dates, the City had already completed the required two 6-month rounds of monitoring and the DEQ had made a determination that the City must install corrosion control treatment as documented in correspondence dated August 17, 2015.

VIII. QUESTIONS RAISED REGARDING THE DEQ'S ACTIONS

1. **What was the DEQ's response to the USEPA's inquiry in February 2015 regarding the optimized corrosion control treatment being implemented by the City under the LCR?**

   The DEQ indicated that the City was complying with the LCR, the lead 90th percentile level was below the action level of 15 ppb, and the City was already conducting the second round of monitoring which would provide for a determination of whether additional treatment needed to be installed. It should be noted that once treatment is designated as optimal, there is no requirement in the LCR that lead results be lower than they were before treatment was installed. The 90th percentile only needs to be lower than the action level in the LCR.

2. **Did the DEQ attempt to mislead the USEPA in a February 27, 2015, e-mail responding to the USEPA's inquiry regarding Optimal Corrosion Control Treatment?**

   No. There was no attempt by the DEQ to mislead the USEPA. There is an e-mail from Steve Busch, Jackson and Lansing District Supervisor, Office of Drinking Water and Municipal Assistance, indicating that the City was practicing a corrosion control program. What was meant was that the City was performing the required monitoring to determine whether or not they were practicing optimized corrosion control. The DEQ subsequently clarified its position in follow-up e-mails and telephone conversations with the USEPA.

3. **When General Motors announced its intent to terminate water service from the City and purchase water from Genesee County, should this have been a sign that there were concerns with the quality of the water after the switch to the Flint River?**

   No. General Motors made a decision regarding the quality of water for its manufacturing processes. At the time, the company indicated that the chloride levels were above limits acceptable as part of the manufacturing facility's limit for production purposes. The level of chlorides in the water treated by the City was not a human health or aesthetic concern.

   Chloride does have a secondary maximum contaminant level established by the USEPA, not for health-related concerns but rather for taste and aesthetic concerns. Concentrations greater than the secondary maximum contaminant level of 250 milligrams per liter (mg/l) become objectionable due to taste. According to the City's records, the chloride concentration in the Flint River water is generally about 45 mg/l and the treated water chloride concentration leaving the water treatment

plant ranges between 55 and 65 mg/l. It should be noted that the City uses ferric chloride as its primary coagulant, although this does not add a significant amount of chloride to the finished water.

4. Has the USEPA subsequently admitted that the LCR is subject to differing interpretations such as that presented by the DEQ?

Yes. On November 3, 2015, the USEPA issued a memorandum regarding the "Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems". This memorandum addresses concerns raised about the application of the LCR, specifically the requirements pertaining to maintenance of optimal corrosion control treatment, in situations in which a large water system ceases to purchase treated water and switches to a new drinking water source. The USEPA states that this type of situation rarely arises, that the language of the LCR does not specifically discuss such circumstances, and that there are differing possible interpretations of the LCR with respect to how the rule's optimal corrosion control treatment procedures apply to this situation. The memorandum is intended to clarify, on a prospective basis, steps agencies should take or apply in the future. USEPA's new guidance provides acknowledgement that the LCR is subject to differing interpretations. The DEQ's interpretation and application of the LCR in this situation was in compliance with the federal SDWA and Act 399.

5. Did the DEQ reject any of the samples submitted by the City?

Yes, samples at two locations were excluded from the compliance calculation in conformance with rules issued by the USEPA.

According to the LCR, compliance samples must be a first draw, 1-liter sample collected from a cold water, kitchen or bathroom tap after the tap has stood unused for not less than 6 hours. Federal and state rules require community public water systems to identify a pool of targeted high-risk sampling sites, called Tier 1 sampling sites. For a municipality such as the City, the Tier 1 sampling pool must consist of single family structures that are:

- served by a lead service line,
- contain lead pipes, or
- contain copper pipes soldered with lead installed after 1982 but before Michigan enacted the ban on solder containing high concentrations of lead (June, 1988).

As long as a community has Tier 1 sites that contain lead service lines, they are required to collect at least 50 percent of their compliance samples from these lead service line sites. Finally, federal and state rules specify that "Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants." Such treatment devices include home softeners, iron filters, etc. Samples collected from multiple family residences, commercial buildings, institutional facilities, or single family structures with point-of-use or point-of-entry treatment can only be used if the community has insufficient Tier 1 sites available.

One of the samples submitted by the City was excluded from the 90th percentile compliance calculation in the latest monitoring period because it was taken from a tap at a non-residential site (non-Tier 1). The other sample result that was excluded was collected from a single family home that has a whole house treatment system. Both of these sites are, therefore, excluded from the compliance consideration based upon federal and state rules.

6. Did the DEQ review the information submitted by the City to ensure all samples were from Tier 1 sites?

Yes. The DEQ examined the information submitted and certified by the City that its LCR compliance monitoring sites consisted entirely of Tier 1 criteria sites, which met the requirements of this rule to maximize sampling of high-risk targeted sites.

During the initial implementation of the LCR approximately 25 years ago, water supplies were required to complete a materials evaluation of their distribution system to identify a pool of targeted, high-risk sampling sites. These sites were to be categorized into one of three Tiers (1, 2, or 3) based on risk. The DEQ created an LCR reporting template for water systems to identify each compliance sampling site by Tier, service line material, and building plumbing material.

If a water system has sufficient Tier 1 sites, they are required to sample them before using any lower Tier sites. Furthermore, if they have sufficient sampling sites with lead service lines, they are required to use them to make up at least 50 percent of their sampling pool each monitoring period. Water supplies are also required to use the same sampling sites each time or explain on their LCR reporting form why they were unable to do so. Finally, the water system is required to certify all of the information they provide on the LCR reporting form is factual.

The DEQ must rely upon the public water system to identify appropriate sampling sites for LCR monitoring. The DEQ public water supply program has no control or authority over service lines or domestic plumbing. As a result, we have no records on construction standards or materials used by customers for these components. If these records exist, they are kept by plumbing code enforcement officials.

In 2015, City employees again certified that the information submitted on their LCR monitoring reports for the two 6-month rounds of monitoring conducted after they began treating the Flint River were accurate, and DEQ staff review of that information indicated it was in compliance with the monitoring requirements. The DEQ had no reason to question the validity of the City's reports until the DEQ heard City employees revealing to the media that the City did not know for certain if its compliance monitoring was collected from homes with lead service lines. As a result, the DEQ began to investigate the City's monitoring sites. As the City began to transfer its customer information to electronic records, the DEQ determined from the information available that a significant number of these sites that had been listed as having lead service lines either did not have them or the information was unavailable. On November 9, 2015, the DEQ notified the City in writing that it would be necessary to conduct a complete assessment of its sampling pool and report back its findings by December 30, 2015. The DEQ is now awaiting the City's response.

7. Did the DEQ believe the levels of lead found at 212 Browning in April 2015 were indicative of a system-wide problem?

High levels of lead were collected in samples taken from this residence. It was determined to be coming from an unusually long lead service line. For some reason, this home was not connected to the water main that ran in front of the house, but rather to a main located on a street several houses away. The City replaced the lead service line May 6, 2015. Since the internal plumbing of the house is plastic, it was believed that replacement of the lead service line would resolve the problem, and subsequent sampling taken at this address showed that replacement of the service line did mitigate the problem. There was, therefore, no reason to believe that this was indicative of a system-wide problem.

8. Do the DEQ's sampling instructions comply with the LCR?

The DEQ continues to seek official clarification from the USEPA regarding the sampling protocols. The DEQ's sampling recommendations were developed to ensure compliance with the USEPA's guidance provided in the preamble to their lead and copper regulations that said that household use should be "typical" for a residential customer on the day before sample collection for lead and copper. Early in the implementation of the LCR, the DEQ had encountered too many situations where compliance samples had been collected from kitchen and bathroom taps that had not been used in days and in some cases, even weeks, resulting in excessively stagnated water and correspondingly high lead levels that did not represent typical exposure expected after overnight stagnation. To incorporate these results into further regulatory decision making could have led to actions that were not indicative of a true public health threat. Further complicating this issue was the USEPA's direct implementation of the LCR in Washington, D.C., where it was learned that some "valid" lead results were not always being included in compliance calculations. Subsequently, the USEPA made invalidation of samples for any reason much more difficult. In order to ensure samples were taken at customer taps representative of typical use, the DEQ devised the current recommendations for ensuring appropriate but not excessive stagnation for LCR monitoring.

The DEQ continues to believe it is appropriate to ensure that taps being sampled are representative of typical household use and are sampled during the recommended stagnation period of 6-18 hours. The LCR does not say the result should represent the "absolute worst case" condition – it talks about sampling the highest risk locations (lead plumbing, lead service lines, high lead content solder piping, etc.) after overnight stagnation and then collecting a first draw sample so as not to flush elevated lead from that tap at that point in time. There are a number of other states that share the DEQ's interpretation of the rule and the DEQ encourages the USEPA to provide official clarification directed at all states with primacy.

9. Does the DEQ require the use of small-neck bottles to obtain samples?

No. The DEQ does not mandate the use of small-neck bottles; it is the sampling method that is specified in both the federal SDWA and Act 399. Each certified drinking water laboratory provides bottles to their customers upon request for any particular analysis in accordance with the specifications in the SDWA. The bottles provided by the DEQ Drinking Water Laboratory for a lead and copper corrosion control sample meet these requirements.

From: Holland, Meegan (GOV)
Sent: Sunday, December 20, 2015 1:59 PM
To: Murray, David (GOV)
Cc: Paciorek, Josh (GOV)
Subject: Re: Michael Moore tweet

The pot stirrer and attention whore.

Sent from my iPhone

On Dec 20, 2015, at 12:37 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> I suspect this Tweet will generate some coverage.
>
> **Michael Moore** @MMFlint
>
> Gov. Snyder should be recalled, arrested & imprisoned for poisoning the ppl left behind in Flint. msnbc.com/rachel-maddow/... #ArrestGovSnyder
>
> **Dave Murray**
> Press Secretary | Executive Office of Governor Rick Snyder
> MurrayD1@michigan.gov
> 517-335-6397, office
> [redacted]
> Twitter:@michigandmurray
>
> <image001.jpg>

From: Jiquanda Johnson <[redacted]
Sent: Tuesday, December 29, 2015 3:00 PM
To: Murray, David (GOV)
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Dave, I just got this. Can you please confirm if it is from the Gov. Snyder's office???? Thanks

---

From: Clark Hughes
Sent: Tuesday, December 29, 2015 2:54 PM
To: Jiquanda Johnson <[redacted]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

---

From: Shannon Elizabeth Murphy
Sent: Tuesday, December 29, 2015 2:51 PM
To: Bryn Mickle <[redacted]>; Clark Hughes <[redacted]>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

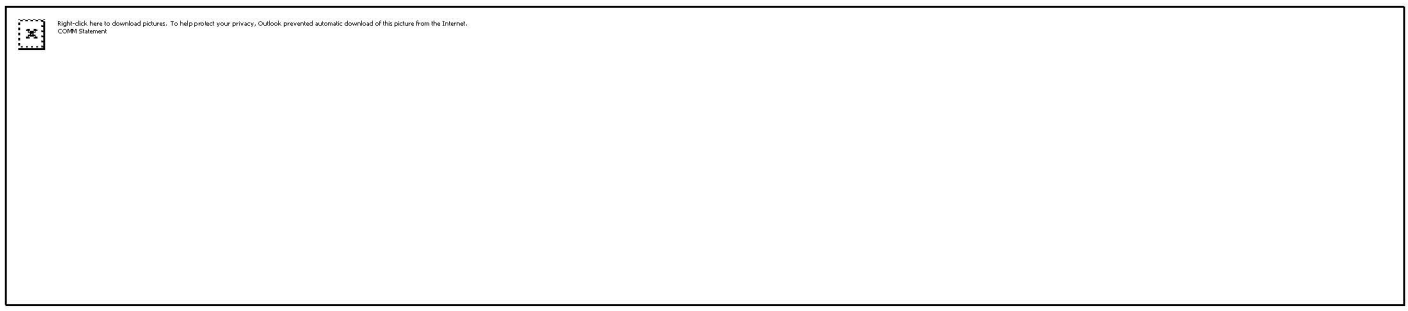
---

From: Jonathan Oosting <[redacted]>
Date: Tuesday, December 29, 2015 at 2:49 PM
To: Conde Nast <[redacted]
Subject: Fwd: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Jonathan Oosting | MLive Media Group | [redacted] 313.319.8559

Begin forwarded message:

> **From:** "GOV Newsroom" <govnewsroom@govsubscriptions.michigan.gov>
> **Date:** December 29, 2015 at 2:44:53 PM EST
> **To:** j[redacted]
> **Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force**
> **Reply-To:** govnewsroom@govsubscriptions.michigan.gov



Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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"We'll continue to work with the community members to make sure we hear and respond to their concerns.

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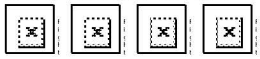
###

STAY CONNECTED:



This email was sent to jcosting@mlive.com on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Murray, David (GOV)
Sent: Tuesday, December 29, 2015 3:01 PM
To: 'Jiquanda Johnson'
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force
Attachments: PR.151229.FlintStatement.docx

Here you go.

Dave Murray
Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@michigandmurray

From: Jiquanda Johnson [mailto:[redacted]
Sent: Tuesday, December 29, 2015 3:00 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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From: Clark Hughes
Sent: Tuesday, December 29, 2015 2:54 PM
To: Jiquanda Johnson [redacted]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

From: Shannon Elizabeth Murphy
Sent: Tuesday, December 29, 2015 2:51 PM
To: Bryn Mickle <[redacted]; Clark Hughes [redacted]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

From: Jonathan Oosting [redacted]
Date: Tuesday, December 29, 2015 at 2:49 PM
To: Conde Nast <[redacted]
Subject: Fwd: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Jonathan Oosting | MLive Media Group | [redacted] | 313.319.8559

Begin forwarded message:

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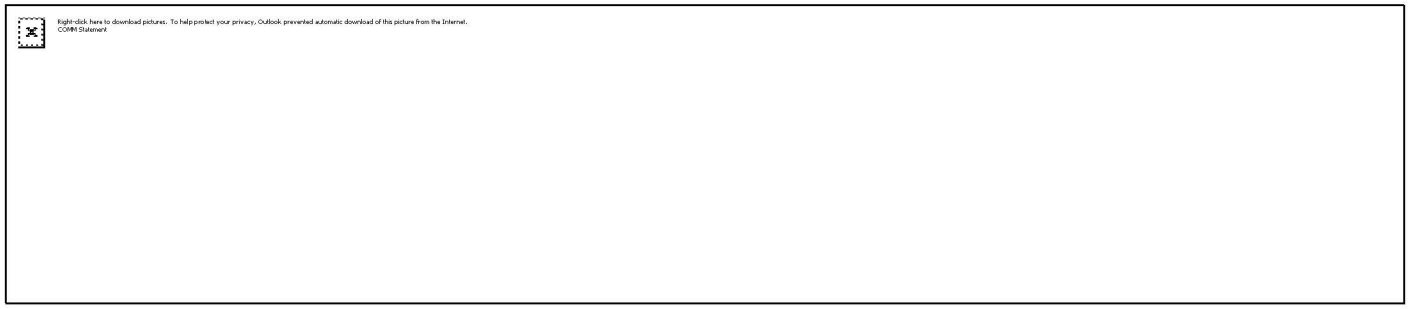

Contacts: Dave Murray, Anna Heaton or Laura Biehl

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# # #

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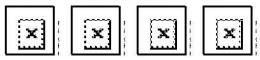

This email was sent to joosting@milive.com on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Dave Murray, Laura Biehl or Anna Heaton 517-335-6397	Tuesday, Dec. 29, 2015

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###

From: Jiquanda Johnson <JJOHNS16@mlive.com>
Sent: Tuesday, December 29, 2015 3:03 PM
To: Murray, David (GOV)
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Is this the first time he has made a public apology saying he is "sorry" about the Flint water crisis? This is the first one that we know of in our office. Just took a an office poll.

From: Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
Sent: Tuesday, December 29, 2015 3:01 PM
To: Jiquanda Johnson [redacted]
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Here you go.

Dave Murray
Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted], mobile
Twitter:@michigandmurray

From: Jiquanda Johnson [mailto:JJOHNS16@mlive.com]
Sent: Tuesday, December 29, 2015 3:00 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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From: Clark Hughes
Sent: Tuesday, December 29, 2015 2:54 PM
To: Jiquanda Johnson [redacted]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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From: Shannon Elizabeth Murphy
Sent: Tuesday, December 29, 2015 2:51 PM
To: Bryn Mickle [redacted] Clark Hughes [redacted]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

From: Jonathan Oosting <joosting@mlive.com>
Date: Tuesday, December 29, 2015 at 2:49 PM
To: Conde Nast <smurphy5@mlive.com>
Subject: Fwd: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Jonathan Oosting | MLive Media Group | [redacted] | 313.319.8559

Begin forwarded message:

From: "GOV Newsroom" <govnewsroom@govsubscriptions.michigan.gov>
Date: December 29, 2015 at 2:44:53 PM EST
To: joosting@mlive.com
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force
Reply-To: govnewsroom@govsubscriptions.michigan.gov

Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

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STAY CONNECTED

This email was sent to joosting@mlive.com on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Emily Lawler <ELAWLER@mlive.com>
Sent: Tuesday, December 29, 2015 3:12 PM
To: Murray, David (GOV)
Subject: Re: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hi Dave,

Quick follow-ups:

1) Is Dan Wyant's resignation effective immediately?

2) Is Dan moving to any other position within state government? I ask because in resignation cases like Andy Dillon and Olga Dazzo I found them still on the the state payroll in different places months after they were booted from state departments.

Thanks,

Emily

From: GOV Newsroom <govnewsroom@govsubscriptions.michigan.gov>
Sent: Tuesday, December 29, 2015 2:44 PM
To: Emily Lawler
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Contacts: Dave Murray, Anna Heaton or Laura Biehl
517-335-6397

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###

STAY CONNECTED:

This email was sent to slawler@milive.com on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Murray, David (GOV)
Sent: Tuesday, December 29, 2015 3:14 PM
To: 'Emily Lawler'
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hello Emily,

We're getting questions from Jaquanda Johnson at the Journal, as well. Are you working together, or should I be connecting with one reporter?

Thanks!

Dave

Dave Murray
Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@michigandmurray

From: Emily Lawler [mailto:ELAWLER@mlive.com]
Sent: Tuesday, December 29, 2015 3:12 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Re: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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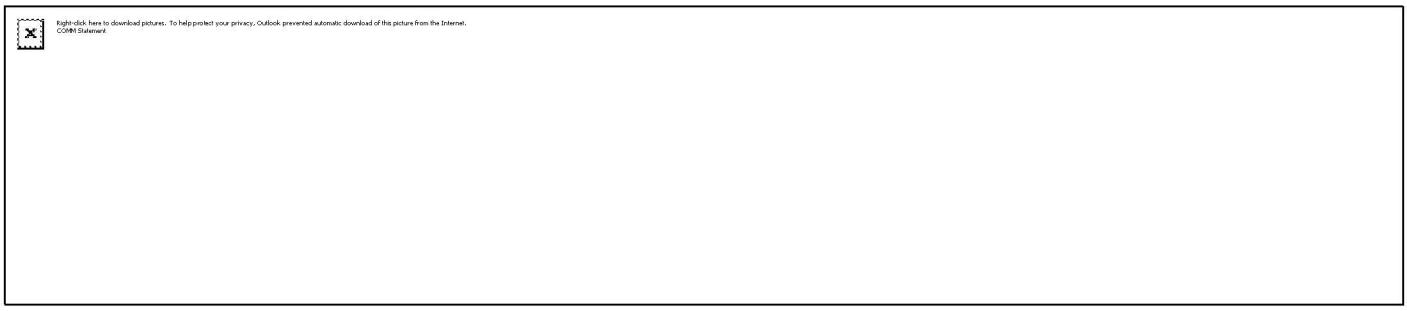
To: Emily Lawler
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



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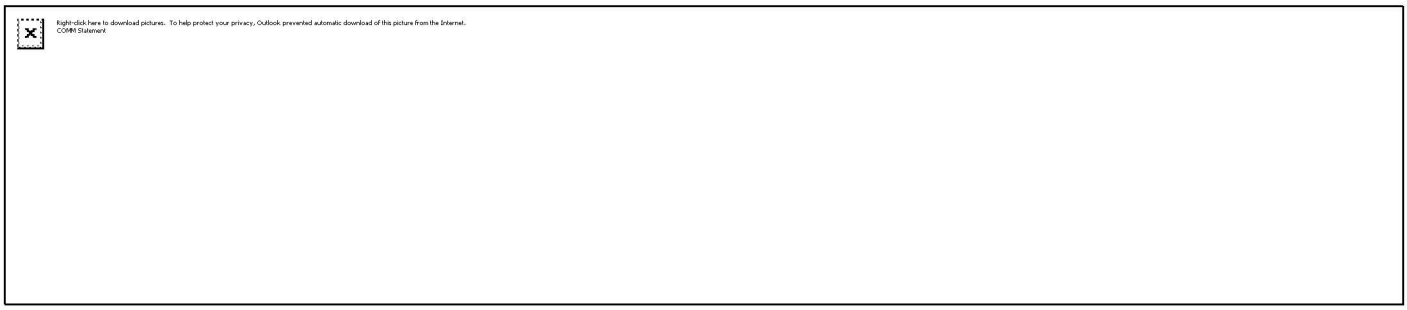

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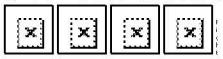

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Sent: Tuesday, December 29, 2015 4:08 PM
To: 'Emily Lawler'
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hello Emily,

I would say that those decisions will be made in the coming days. Right now the focus has been on what was covered in the Governor's statement. I'll be sure to keep you in the loop.

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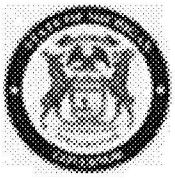

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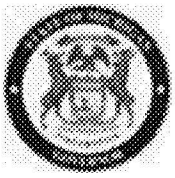

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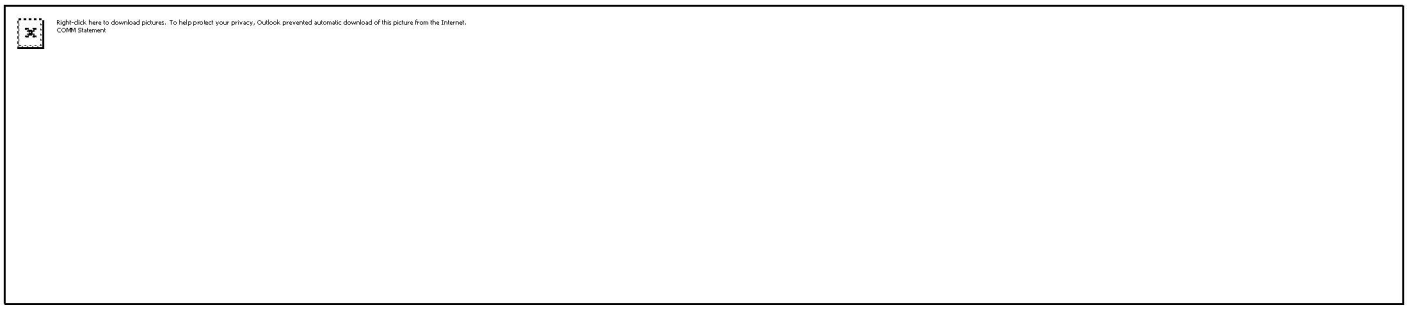

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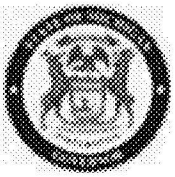

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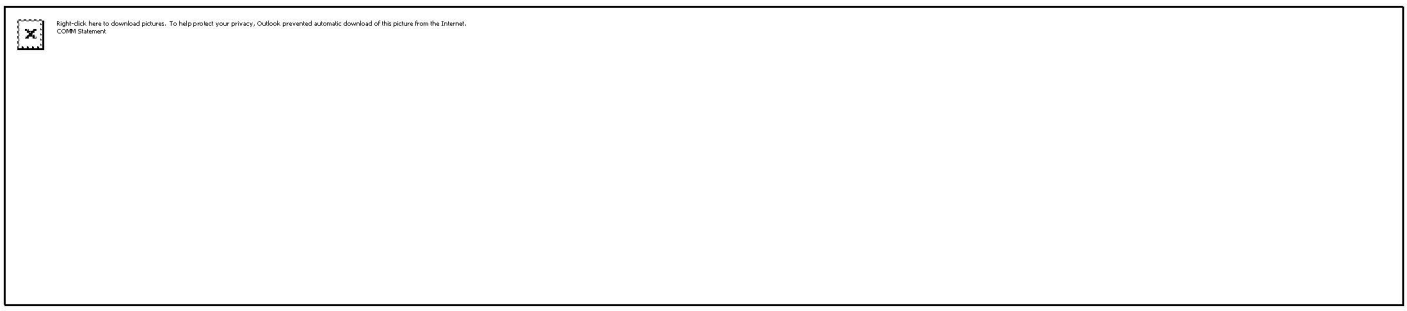

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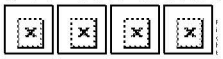

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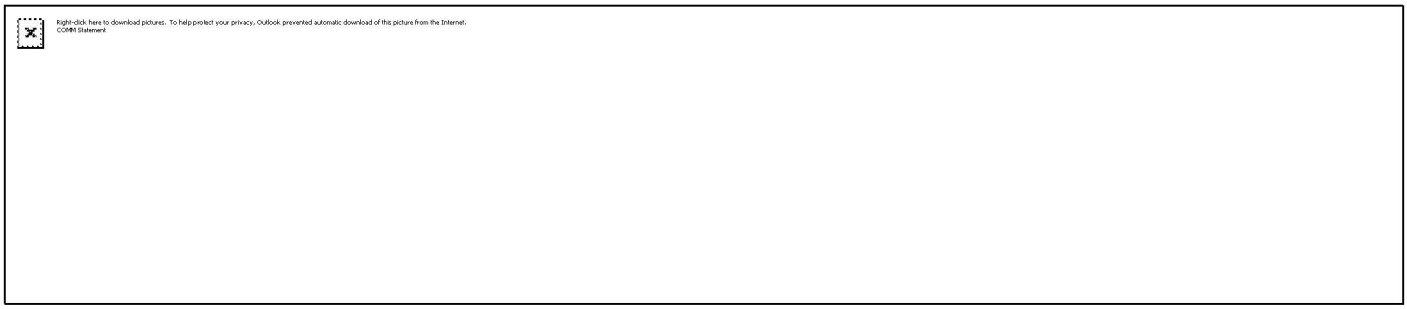

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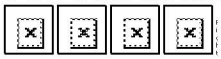

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From: Kiertzner, James <jim.kiertzner@wxyz.com>
Sent: Tuesday, December 29, 2015 5:14 PM
To: Murray, David (GOV)
Subject: Fw: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

When is this resignation effective?

Will you be notifying the media in advance when the Governor meets with Flint's Mayor? Will it be public or will they have a public availability?

Jim

Jim Kiertzner
7 Investigator
WXYZ Detroit
W: 248-827-9407
[redacted]
jimk@wxyz.com
20777 West 10 Mile Road
Southfield, Michigan 48075
Twitter: kiertzner7

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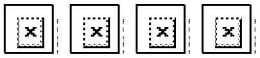

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Sent: Tuesday, December 29, 2015 5:25 PM
To: 'Kiertzner, James'
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hi Jim,

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Details about the meeting with the mayor are to be determined.

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Dave Murray
Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@michigandmurray

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Jim

Jim Kiertzner
7 Investigator
WXYZ Detroit
W: 248-827-9407
[redacted]
jimk@wxyz.com
20777 West 10 Mile Road

Southfield, Michigan 48075
Twitter: kiertzner7

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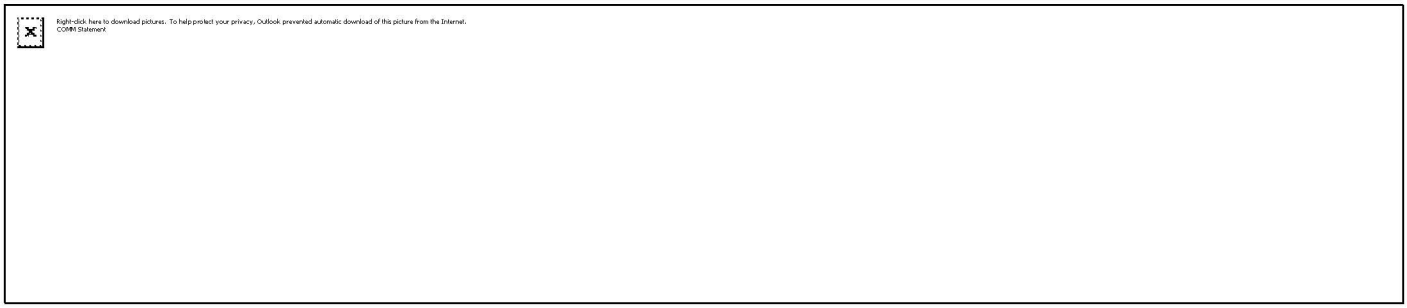

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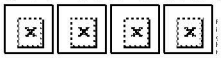

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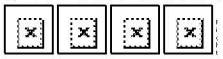

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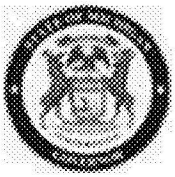

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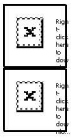

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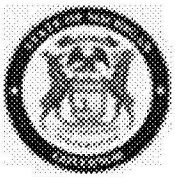

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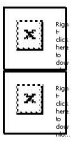

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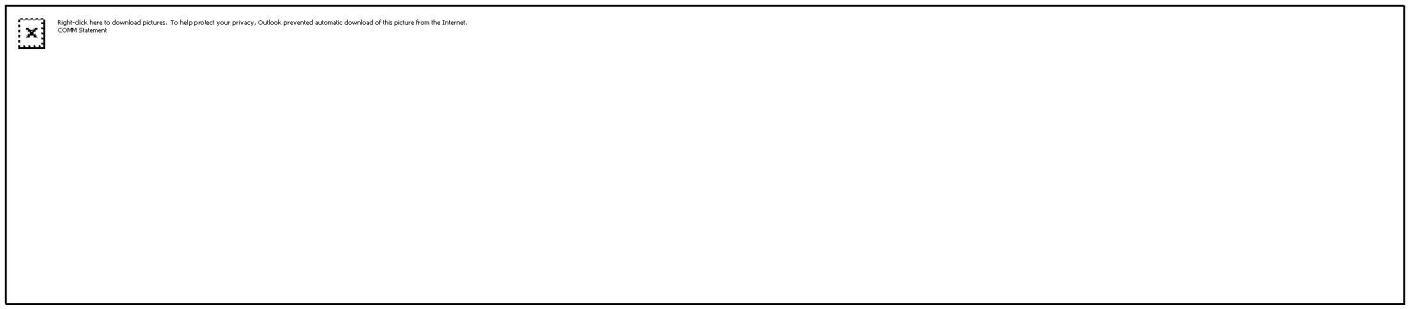

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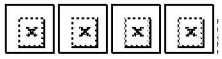

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Attachments: image002.jpg

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Sent from my iPhone

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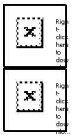

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Subject: Fw: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

When is this resignation effective?

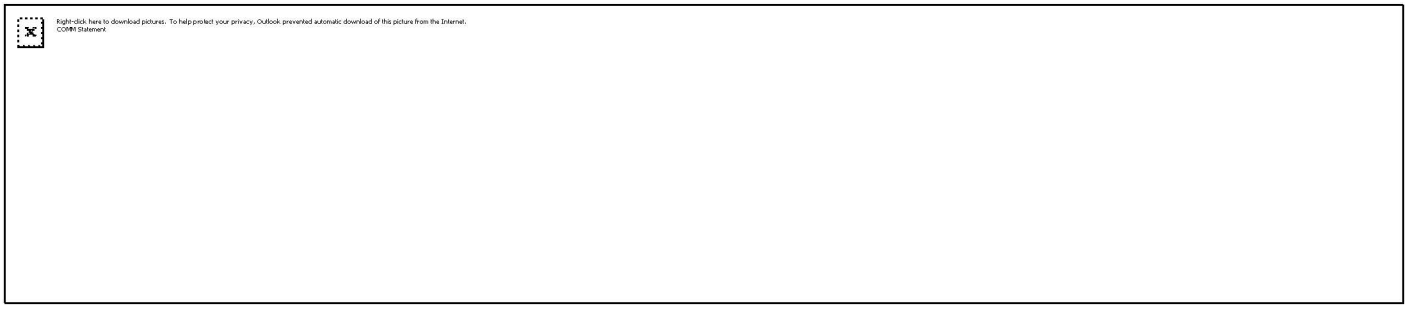
Will you be notifying the media in advance when the Governor meets with Flint's Mayor? Will it be public or will they have a public availability?

Jim

Jim Kiertzner
7 Investigator
WXYZ Detroit

W: 248-827-9407
[redacted]
jimk@wxyz.com
20777 West 10 Mile Road
Southfield, Michigan 48075
Twitter: kiertzner7

From: GOV Newsroom <govnewsroom@govsubscriptions.michigan.gov>
Sent: Tuesday, December 29, 2015 2:44 PM
To: Kiertzner, James
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



Contacts: Dave Murray, Anna Heaton or Laura Biehl
517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Changes to take place at DEQ, meeting planned with Mayor Karen Weaver

In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:

"When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

"The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force's final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

"We'll continue to work with the community members to make sure we hear and respond to their concerns.

"In addition, MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to

address problems cited by the task force.
"But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term.
"I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.
"I know many Flint citizens are angry and want more than an apology. That's why I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss other ways the state can offer assistance.
"These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we're committed to doing everything we can to protect the well-being of our citizens."

###

STAY CONNECTED

This email was sent to jim.kiertzner@wxyz.com on behalf of: The Executive Office of the Governor 111 South Capitol Avenue Lansing, MI 48909 · 517-335-7858

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Subject: FW: Conf Call re Flint Water
Location: [redacted]

Start: Thu 9/24/2015 3:30 PM
End: Thu 9/24/2015 4:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Muchmore, Dennis (GOV)

Do you want to be on this call?

-----Original Appointment-----
From: Muchmore, Dennis (GOV)
Sent: Thursday, September 24, 2015 1:41 PM
To: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Clement, Elizabeth (GOV); Clayton, Stacie (GOV); Baird, Richard (GOV); VanSickle, Michele (GOV); Murray, David (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Lasher, Geralyn (DCH); Grijalva, Nancy (DCH); Saxton, Thomas (Treasury); Pleyte, Beth (Treasury); Walsh, John (GOV); Hall, Jean (GOV); Mcbride, Bill (GOV)
Subject: Conf Call re Flint Water
When: Thursday, September 24, 2015 3:30 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: [redacted]

[redacted]
[redacted] - Harvey to host

Subject:	Flint Water Conf Call
Start:	Fri 9/18/2015 8:00 AM
End:	Fri 9/18/2015 9:00 AM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Clayton, Stacie (GOV)
Required Attendees:	Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Posthumus, Dick (GOV); Brown, Eric (GOV); Lyon, Nick (DCH); Wyant, Dan (DEQ) (WyantD@michigan.gov); Khouri, Nick (TREASURY); Wendy Wisniewski (WisniewskiW@michigan.gov); Rospond, Laurie (GOV); Grijalva, Nancy (DCH); Thelen, Mary Beth (DEQ); Doyle, Maureen (Treasury)

Call In: [redacted]
Access:
Harvey will host

Participants
Dennis Muchmore
Dick Posthumus
Harvey Hollins
Eric Brown
Nick Lyon
Dan Wyant
Nick Khouri

Subject:	Flint Water Conf Call
Start:	Fri 9/18/2015 8:00 AM
End:	Fri 9/18/2015 9:00 AM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Clayton, Stacie (GOV)
Required Attendees:	Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Posthumus, Dick (GOV); Brown, Eric (GOV); Lyon, Nick (DCH); Wyant, Dan (DEQ); Khouri, Nick (TREASURY); Wisniewski, Wendy (GOV); Rospond, Laurie (GOV); Grijalva, Nancy (DCH); Thelen, Mary Beth (DEQ); Doyle, Maureen (Treasury); Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Optional Attendees:	Mcbride, Bill (GOV)

Call In: [redacted]
Access: [redacted]
Harvey will host

Agenda

DEQ update on Flint water and elected officials briefing
Dennis Muchmore update
Harvey Hollins update
Treasury update
DHHS update
Action steps going forward (DEQ)

Participants

Dennis Muchmore
Dick Posthumus
Harvey Hollins
Eric Brown
Bill McBride
Nick Lyon
Dan Wyant
Nick Khouri

Subject: Flint Water Call
Location: 1-888-[redacted] Access [redacted]

Start: Wed 9/30/2015 7:30 AM
End: Wed 9/30/2015 8:00 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Taylor, Nicole (GOV)
Required Attendees: Mcbride, Bill (GOV); Wyant, Dan (DEQ); Lyon, Nick (DCH); Brown, Eric (GOV)
Optional Attendees: Thelen, Mary Beth (DEQ); Grijalva, Nancy (DCH); Shaler, Karen (DEQ)

1-888-[redacted]
Access #[redacted]
Host #[redacted]

From: Wurfel, Brad (DEQ)
Sent: Thursday, August 27, 2015 1:59 PM
To: Brown, Eric (GOV)
Subject: FW: Need upate on lead / copper tests for Flint
Attachments: DWSD-CorrosionControlStudy.pdf; Flint lead history.pdf; DWSD-Flint-1993-Lead-Letter.pdf

First of two communications that will be of interest. Apologies, Eric, been keeping many in the front office apprised but I neglected to cc you on several items to keep you in the loop on Flint. My bad. Will get that fixed. In the meantime, apologies for what is going to briefly look like a lot of stuff. Background issues in flint have to do with TTHM (Total Trihalomethanes) from using a lot of chlorine to treat organics in the Flint River source water. More recently, we did statutorily required test for lead and copper … which lead to locals starting a rumor that there is lead and copper in the water. There isn't.
b

From: Busch, Stephen (DEQ)
Sent: Friday, July 24, 2015 3:46 PM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: Need upate on lead / copper tests for Flint

Brad,

As we discussed, the City has completed the last round of monitoring (Jan 1 – June 30, 2015). The last samples came in about a week ago. We have made the compliance determination that the 90th percentile level is 11 parts per billion, which is below the Action Level Standard of 15 parts per billion (there is no Lead maximum contaminant level standard). The federal rule requires measuring lead levels in water from household plumbing materials to determine the corrosivity of the City's water in order to limit exposure.

I have provided a summary of Flint's lead compliance monitoring from the last 20+ years since this regulation started in 1991. The City of Flint itself has never had a 90th percentile level exceed the 15 part per billion action level. Sampling requirements look at the worst case plumbing materials. Samples must be collected in accordance with the regulatory requirements and criteria in order to be used for compliance determinations.

Because the City of Flint serves a population of over 50,000 they are required to have Fully Optimized Corrosion Control. While it is possible to meet the fully optimized requirement without additional treatment, based on their two rounds of sampling since switching to the Flint River, we have determined they did not meet the eligibility for this per the regulation. They now have to complete a study (within 18 months) and are then allowed a period of additional time (2 additional years) to install the selected treatment for Fully Optimized Corrosion Control in accordance with the regulatory requirements. This is what DWSD was required to do back in 1993 – 1997 (see attached letter and study). We are planning to suggest the City directly submit a treatment process to shorten the timeline to achieve full optimization. This letter is currently being drafted but won't be ready to mail out for another week.

Liane and I had a conference call with EPA region V in Chicago on Tuesday to go over all of this and they are in support of these next steps with the City.

The matter will be potentially further complicated when the City switches over to water from the Karegnondi Water Authority next year to re-evaluate the continuing requirement to fully optimize corrosion control.

The DEQ recognizes that there is has been no level of lead exposure determined to be safe, but again the regulation was developed to optimize water corrosivity to limit exposure and the City is following the regulatory requirements.

Lead is not coming from the Flint River or the City's Water Treatment Plant or the public distribution system. It is from lead service lines into homes and from plumbing materials and fixtures within the private property of the household.

As watermains are replaced within the City lead services associated with that section of watermain would be replaced in order to reconnect to City water. This would also place burden on the homeowner to pay for having the service line re-plumbed. However, since 2000 only 16 miles of the City's 500 miles of watermain have been replaced as they did not have the financial means to do so.

Let us know if there are questions or you need any additional information.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 12:09 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ)
Subject: Need upate on lead / copper tests for Flint

Guys, the Flint Ministers met with the Governor's office again last week. They also brought along some folks from the community – a college prof and a GM engineer – who imparted that 80 water tests in Flint have shown high lead levels.

Could use an upate on the January / june testing results, as well as recap of the December testing numbers, and any overview you can offer to edify this conversation.
Call me or email today if possible. Thanks!
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]cell

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
WATER BOARD BUILDING

735 RANDOLPH STREET
DETROIT, MICHIGAN 48226-2830
PHONE 313 • 224 • 4800/224•4801
FAX 313 • 224 • 6067

June 10, 1994

To: DWSD Wholesale Customers

RE: EXECUTIVE SUMMARY OF DETROIT'S CORROSION CONTROL STUDY

Enclosed is a copy of the Executive Summary prepared by our consultant, Tucker, Young, Jackson & Hull, detailing work to date on the Corrosion Control Study performed for Detroit and Detroit's wholesale customers.

The EPA required large utilities to test water samples in highest risk homes for led and copper content in 1992 to determine if the action levels of 15 micrograms per liter and 1.3 milligrams per liter respectively were exceeded. Detroit complied with this requirement and determined that the action level for lead was exceeded in many communities. Therefore, DWSD conducted and continues to conduct a public education program designed to inform consumers how to reduce their exposure to lead.

The EPA further required large water suppliers to determine if their lead could be less corrosive and, if so, the utility was mandated by the Lead and Copper Rule to determine ways the water could be made less corrosive and report their recommendations to the primary agency. For DWSD, the primary agency is the Michigan Department of Public Health (MDPH).

After several years of study, DWSD is forwarding the complete study findings to the MDPH for their consideration. It was concluded that DWSD could reduce the corrosivity of the water in the most cost effective and efficient manner by the addition of ortho-phosphate, specifically in the form of phosphoric acid. The Executive Summary of these findings is being forwarded to you for your information. The MDPH has until the end of December 1994 to consider DWSD's recommendation. In the interim, DWSD plans on conducting a demonstration test of the corrosion control treatment in our distribution system to further assist the MDPH and to further safeguard public health.

Very truly yours,

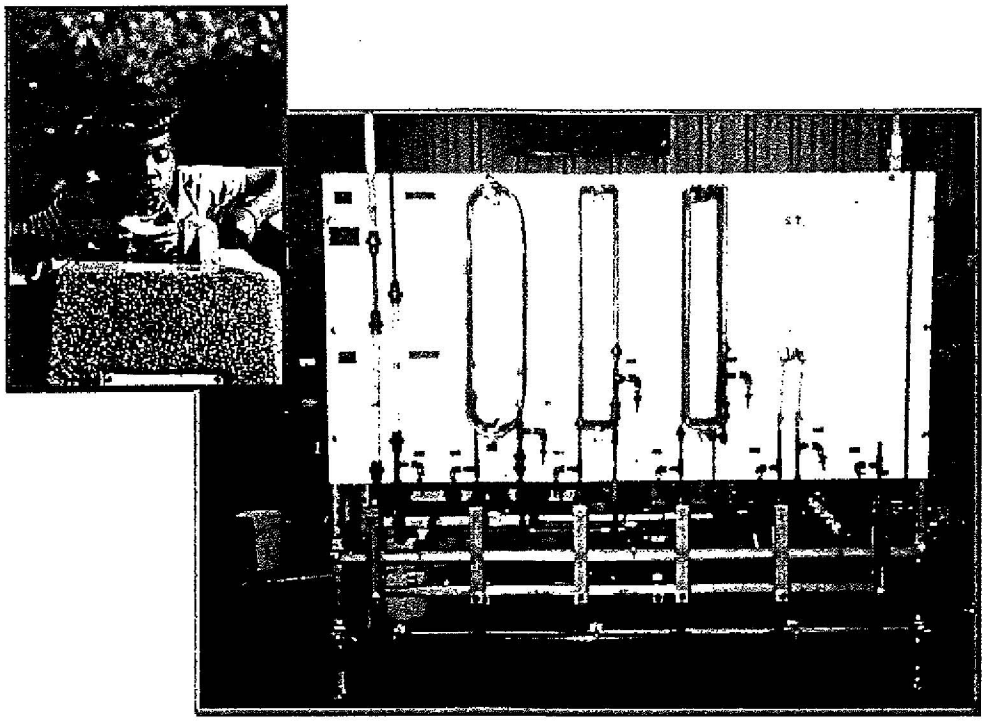
Irving M. Schuraytz, P.E.
Assistant Director, Water Supply Operations

Kathleen Leavey
Deputy Director

KL/IMS/JH/cs

Executive Summary

Lead and Copper Corrosion Control Optimization Study



prepared by

Tucker, Young, Jackson, Tull, Inc., in association with
CH2M HILL, INC., and Economic and Engineering Services, Inc.

May 1994

Detroit Water and Sewerage Department

Introduction

As a result of the Safe Drinking Water Act (SDWA) Amendments of 1986, the U.S. Environmental Protection Agency (EPA) published final drinking water regulations for lead and copper in the June 7, 1991, *Federal Register*. Those regulations, known as the Lead and Copper Rule (LCR), require:

- Tap water monitoring, which is a new approach for water utilities
- Treatment optimization for lead and copper corrosion control
- Public education and lead service line removal if utilities exceed preset lead or copper levels

Large utilities, serving populations greater than 50,000, are required to conduct corrosion control studies to demonstrate that they are either already providing optimal treatment or to determine optimal treatment for their system.

DWSD made necessary public notices and embarked on studies to develop optimal treatment solutions.

In response to the regulations, the Detroit Water and Sewerage Department (DWSD) conducted two rounds of monitoring at home water taps for lead and copper and throughout the distribution systems for other water quality parameters. Monitoring was a cooperative effort between the DWSD, wholesale water customers, and the Michigan Department of Public Health (MDPH). Copper levels were well below EPA limits. Lead levels, however, exceeded EPA action levels (ALs) and DWSD made necessary public notices and embarked on studies to develop optimal treatment solutions.

Lead exposure sources for humans include air, food, dust, paint, and drinking water. Elevated lead levels in blood have been associated with adverse health effects in humans. Federal health authorities have many programs to reduce lead exposure including low-lead gasoline and reduced lead content in paint. Although drinking water may not be the major source of lead, reducing lead levels in drinking water will have a positive health benefit. An additional benefit of corrosion control is prolonged life for water distribution pipes and home plumbing. This results in lower costs for water utilities and their customers.

In March 1992, the DWSD contracted with Tucker, Young, Jackson, Tull, Inc. (TYJT), in association with CH2M HILL, INC., and Economic and Engineering Services, Inc. (EES), to perform a lead and copper corrosion control study. The purpose of the study was to determine the optimal approach for reducing lead and copper concentrations in DWSD drinking water without adversely affecting other water quality characteristics. Major tasks in this study were to:

- Evaluate existing water quality data, existing distribution system pipe materials and the results of lead and copper sampling
- Identify and analyze feasible and practical treatment methods to reduce lead and copper corrosion (desktop analysis)
- Design and construct a pipe-loop testing apparatus to evaluate treatment alternatives identified in the desktop analysis

- Operate the pipe loops for 1 year to evaluate selected corrosion control treatments on different pipe materials
- Evaluate the effectiveness and feasibility of the tested treatment alternatives in reducing lead and copper concentrations
- Recommend an optimum lead corrosion control treatment
- Develop an implementation plan for full-scale corrosion control facilities

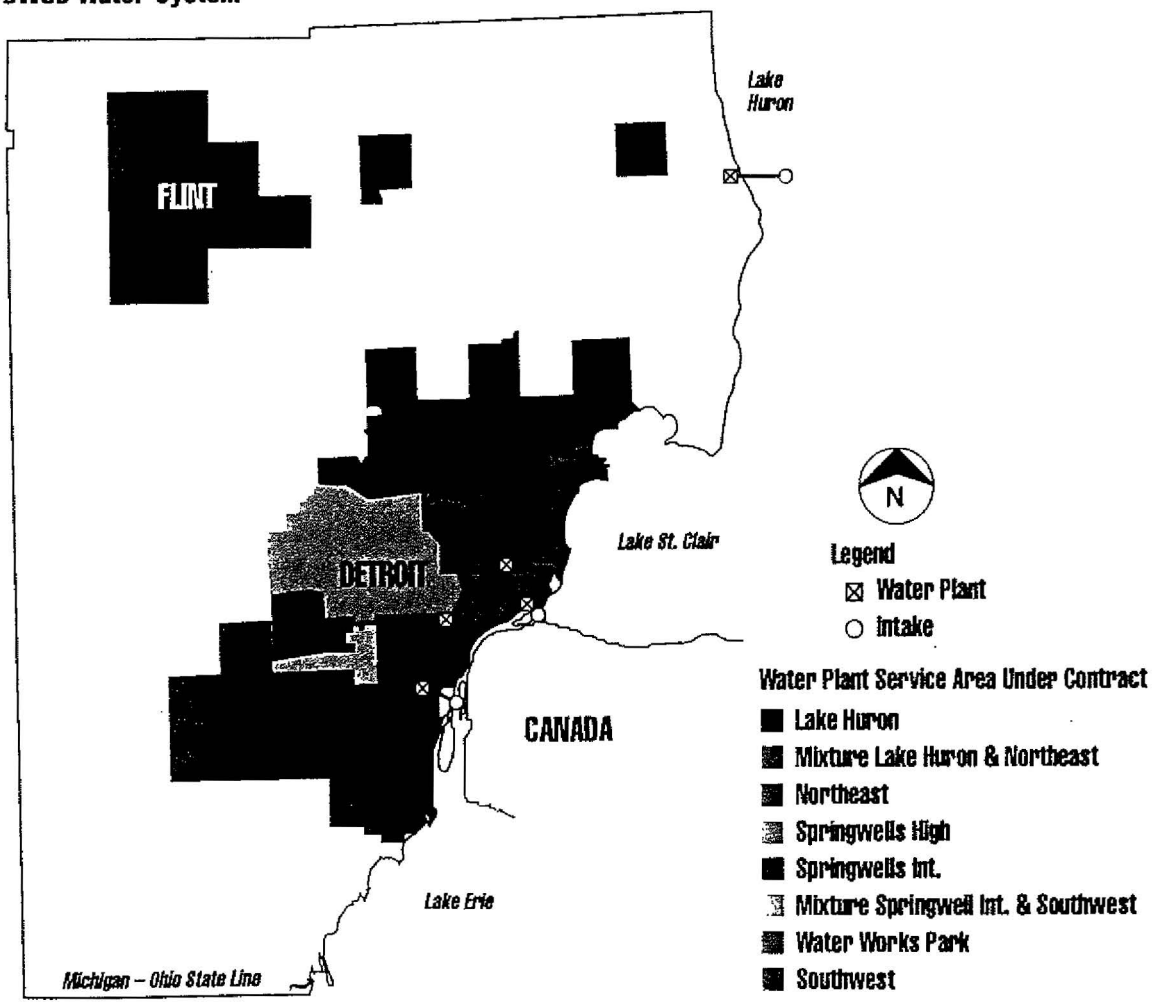
This report presents the results of the DWSD Lead and Copper Corrosion Control Optimization Study.

Existing Conditions

The DWSD obtains water from three intakes. Two of these, the Belle Isle and the Fighting Island Intakes, take water from the Detroit River. The third intake is on Lake Huron. Water is treated at five water treatment plants (WTPs) including the Water Works Park, Southwest, Springwells, Northeast, and Lake Huron WTPs. The water system is shown in Figure ES-1. Treated water from the 5 WTPs is distributed to the City of Detroit and 119 wholesale water customer systems. The DWSD water system serves about 4 million people.

Water leaving the WTPs is of good quality and considered moderately

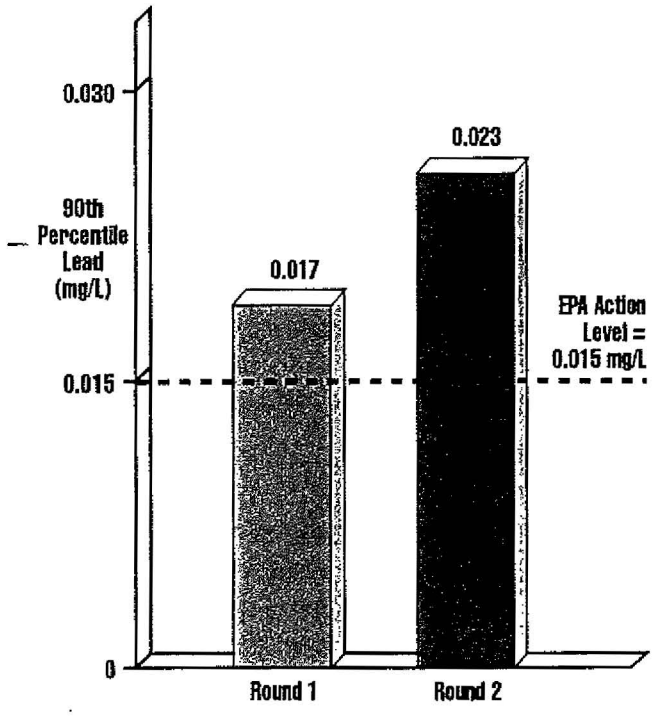
Figure ES-1
DWSD Water System



corrosive. For example, pH from the five WTPs averages 7.4, alkalinity averages 76 mg/L ($CaCO_3$), and hardness averages 100 mg/L ($CaCO_3$). Nevertheless, some increase in lead and copper is resulting from the corrosive action of the water, primarily on service pipe and household plumbing. The main sources of lead are 50:50 lead/tin solder, brass containing lead used in faucets, and lead service lines and plumbing.

The regulation lead AL is 0.015 mg/L at the 90th percentile in home water taps. During the LCR Compliance Monitoring conducted in 1992, DWSD's 90th percentile lead concentration was 0.017 mg/L in the first round and 0.023 mg/L in the second round of sampling (Figure ES-2). Looking at the data in a slightly different manner, 35 to 37 percent of the 119 purveyor water systems exceeded the AL for lead.

Figure ES-2
LCR Compliance Monitoring Results for Lead



For copper, the 90th percentile concentrations were 0.34 and 0.19 mg/L for two rounds of sampling–well below the copper AL of 1.3 mg/L (Figure ES-3). Lead uptake, therefore, is the major concern within the DWSD water system.

Determining the optimal lead control treatment is essential; it is the objective of conducting this corrosion control study. Further, there are an estimated 200,000 lead service lines (LSLs) in DWSD's direct service area and possibly more in areas served by wholesale customers. After corrosion treatment is optimized, the possibility exists that lead ALs may still be over 0.015 mg/L at the 90th percentile. Should this occur, the DWSD would need to embark on a removal program for LSLs, which could cost between $300 and $800 million.

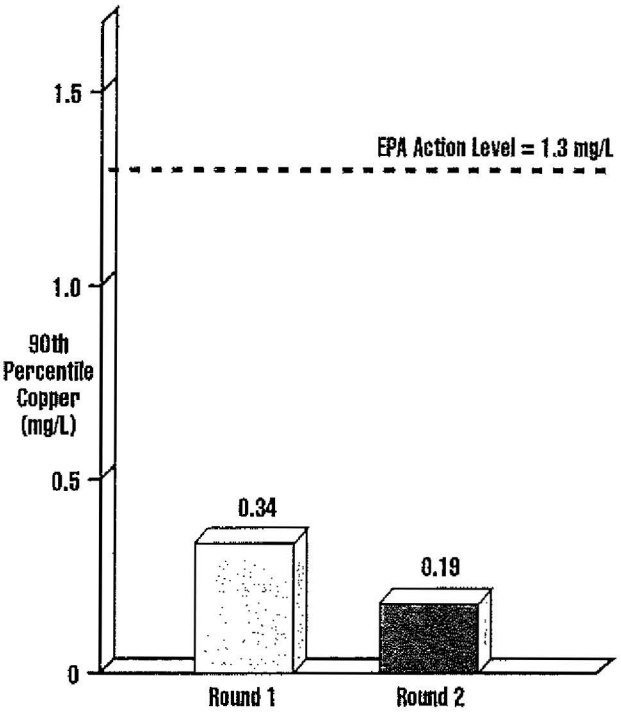
Desktop Analysis

To reduce the number of chemicals for long-term testing, a screening analysis was performed using desktop techniques recommended by U.S. EPA. Lead corrosion control treatment methods examined for their applicability to DWSD are as follows:

- Polyphosphates
- Orthophosphates
- Zinc orthophosphate
- Polyphosphate/orthophosphate blends
- Silicates
- pH adjustment
- Alkalinity adjustment
- Calcium adjustment

The main criteria for selecting a lead corrosion control method is performance for lead uptake reduction. Lead corrosion control methods were also evaluated

Figure ES-3
LCR Compliance Monitoring Results for Copper



based on effects on other drinking water regulations, industrial water users, wastewater treatment, water quality, water treatment operations, consecutive water systems, and multiple sources of supply and treatment.

Based on this evaluation, the following chemical treatments were eliminated from consideration for pipe-loop testing.

- **Polyphosphates.** These products are primarily used to sequester iron, calcium, and manganese and may actually do more to promote lead corrosion than to prevent it.
- **Polyphosphate/Orthophosphate Blends.** These products have not been proven to be more effective than orthophosphates alone for lead reduction, and their proprietary chemical composition makes selection of the optimum product difficult.
- **Silicates.** Sodium silicate inhibitors require a high dosage for lead control and, based on a survey of major industries, would have significant adverse effects on industrial water users.
- **Alkalinity Adjustment.** This technique would have marginal performance for lead reduction based on DWSD water quality and would be impractical for a system the size of DWSD.
- **Calcium Adjustment to Deposit a Calcium Carbonate Layer.** This technique is not a proven method for lead reduction, and would be difficult to produce a uniform layer throughout a distribution system the size of DWSD. Calcium carbonate deposition, however, can occur when pH is raised for lead reduction. This situation is addressed under the pH adjustment alternative.

Lead corrosion control treatment methods applicable for DWSD water are as follows:

- **Orthophosphates.** These products have been shown to be an effective means of lead reduction for water similar to that of the DWSD.
- **Zinc Orthophosphate.** These products are also a proven method of lead reduction, although there is concern about zinc in industrial water and wastewater.
- **pH adjustment.** This technique is also a proven method of reducing lead solubility, although higher pHs affect some industrial users and can increase calcium carbonate deposition.

A survey of 16 Great Lakes area water utilities using water of similar quality to that of DWSD demonstrated the effectiveness of orthophosphate, zinc orthophosphate, and pH adjustment in reducing lead concentrations at the consumers' taps. Those treatment methods, therefore, were retained for further testing in the pipe-loop apparatus.

Pipe-Loop Testing

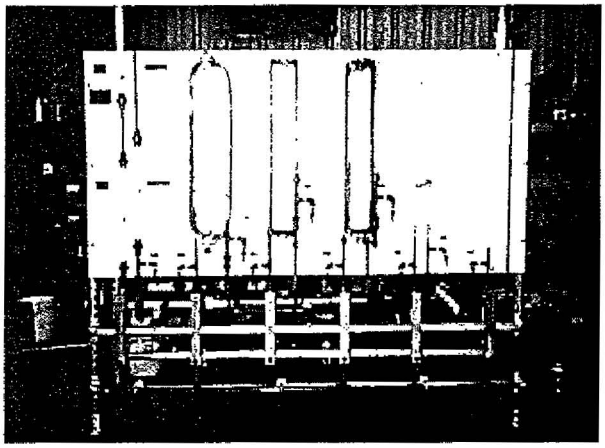
Based on the desktop analysis, it was concluded that the following treatments would be tested in the pipe loops:

- Adjusting pH to 8.1 using sodium hydroxide
- Adjusting pH to 8.7 using sodium hydroxide
- Adding zinc orthophosphate at doses of 0.4 mg/L for zinc and phosphorous (as P)
- Adding orthophosphate using phosphoric acid at a dose of 0.4 mg/L as P

Pipe-loop testing produces information on the corrosion control treatment most likely to effectively reduce lead levels.

It is important to understand that pipe-loop testing is conducted to provide information on the **relative effectiveness** of corrosion control treatments. The results cannot be used to predict actual lead levels that may occur at customers' taps in the water system. Pipe-loop testing, however, produces information on the corrosion control treatment most likely to effectively reduce lead levels and is an approved optimization technique.

Figure ES-4
Typical Testing Apparatus



A pilot-scale testing apparatus was designed and constructed to test each of the treatment techniques on different pipe materials. Five pipe-loop racks were constructed: one for each of the four methods and another for control (no treatment provided). Each pipe-loop rack included one new lead pipe loop, two identical copper pipe loops with lead soldered joints, one brass tester, and one section of old lead pipe. Three weight loss testers were also included for measuring corrosion rates of steel, galvanized steel, and copper. A typical testing apparatus is shown in Figure ES-4.

The pipe-loop facility was installed in the lower level of the Water Works Park High Service Pump Station and operated from January to November, 1993. After an initial period of passivation, water samples were collected on a weekly basis and analyzed for lead, copper, and zinc. The 1-liter water samples were taken after the water had been in contact with the pipe loop materials for 8 hours. This was done to represent the first-draw sampling required by the LCR. Additional sampling included daily monitoring for pH, chemical doses, and temperature. Disinfection

by-products (DBPs) and pipe insert weight loss were done quarterly. Flavor profile analyses to assess any changes in tastes or odors were run monthly.

Results of pilot testing indicated:

- The inhibitor treatments, zinc orthophosphate, and phosphoric acid are statistically better than the untreated control for both old and new lead piping (Figure ES-5).
- For lead solder and copper piping, the median lead levels were lowest in the water with inhibitors (zinc orthophosphate and phosphoric acid), but only the phosphoric acid results were statistically better than the other loops (Figure ES-6).
- For brass, the results indicated that the treatments were no better than the control; however, lead levels were near the detection limit in the brass testers (Figure ES-6).
- Zinc orthophosphate and phosphoric acid were also found to be the most effective treatments in reducing copper (Figure ES-7).

Figure ES-5
Relative Lead Levels from Lead Pipe

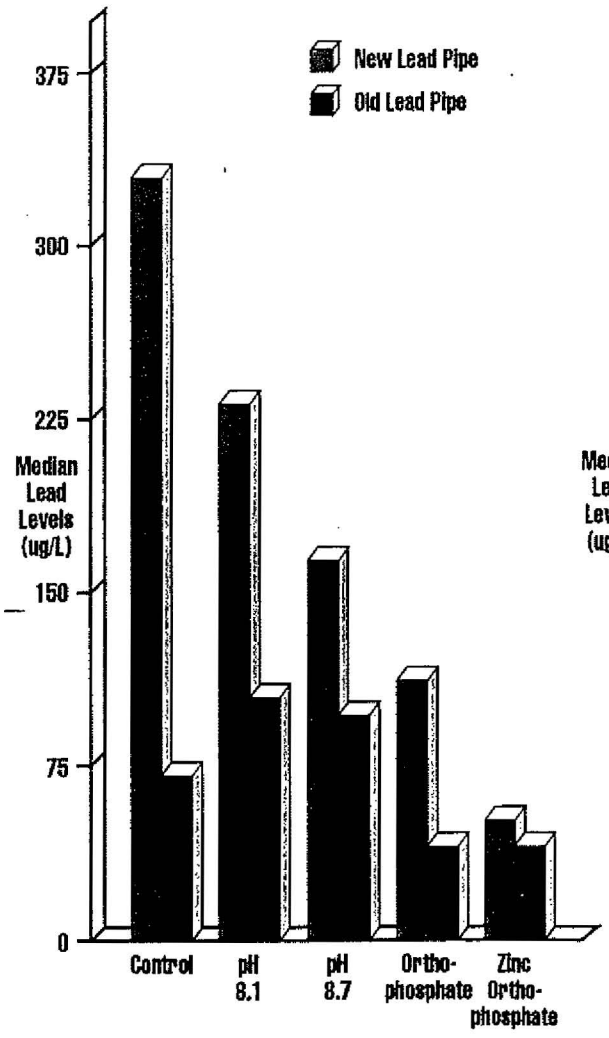


Figure ES-6
Relative Lead Levels from Soldered Copper and Brass

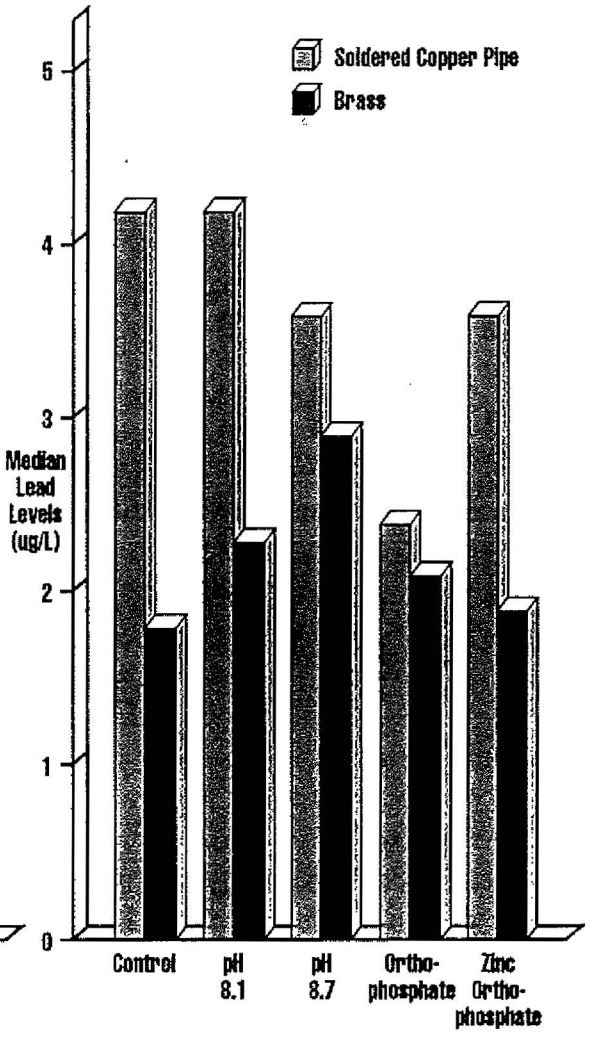
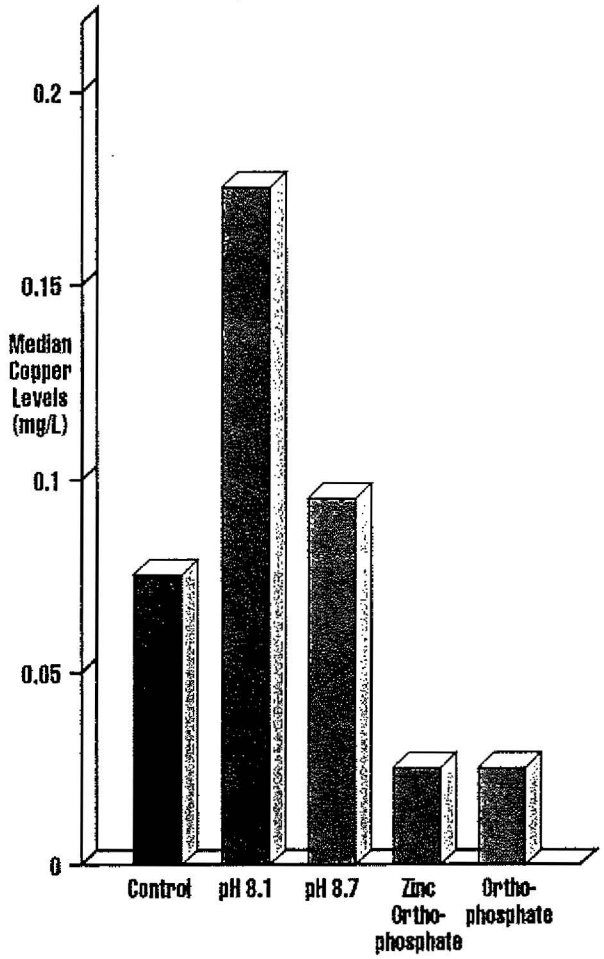


Figure ES-7
Relative Copper Levels from Copper Pipe



- DPBs were increased for the pH adjustment treatments as expected. The DBPs formed as a result of this increase, however, did not exceed EPA-proposed limits. The orthophosphate and zinc orthophosphate did not increase DBPs.
- None of the corrosion control treatments had an adverse effect on the taste and odor of the water produced.

Evaluating Corrosion Control Treatment

The four corrosion control treatments tested in the pipe loops were evaluated based on the following criteria:

- Performance for lead uptake reduction
- Feasibility of implementation within regulatory and functional constraints
- Reliability in terms of operational consistency and continuous corrosion control protection
- Cost

Pipe-loop data analyses indicated orthophosphate and zinc orthophosphate are most likely to yield the best results for lead reduction. pH adjustment was not as effective for lead control. Orthophosphate and zinc orthophosphate were effective at reducing copper levels.

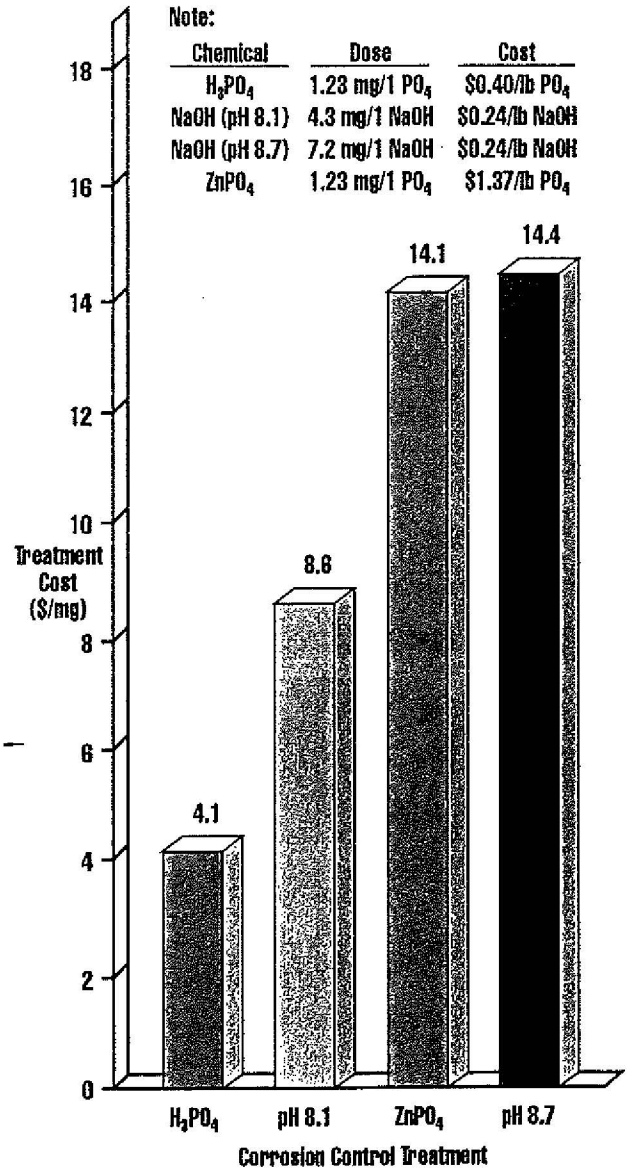
A feasibility analysis indicated that industrial water users would be affected adversely by zinc or a higher water pH. Wastewater operations would be adversely affected by zinc and orthophosphates loadings. There were no major effects of corrosion control treatment on drinking water regulations. pH adjustment could, however, decrease disinfection effectiveness and increase DBP formation.

The reliability of zinc orthophosphate and sodium hydroxide chemicals is less than would be expected for orthophosphates. Zinc orthophosphate is a proprietary chemical with price and supply constraints. Sodium hydroxide availability and price depend on market conditions. Orthophosphate (phosphoric acid) is available as a generic chemical and is commonly used in the food and bever-

age industry; therefore, price and availability are more stable. From a WTP-operations standpoint, pH adjustment is less reliable because pH can change with raw water quality and treatment conditions.

The chemical cost of each treatment alternative is shown in Figure ES-8. Phosphoric acid addition is less than half the cost of pH adjustment to 8.1, the next lowest chemical cost. This represents an average cost savings of about $2,400 per day. Phosphoric acid could save the DWSD about $10 million in present worth in the next 20 years compared to the next lowest cost alternative.

Figure ES-8
Treatment Alternatives Costs



Selecting Corrosion Control Treatment

The relative ranking of alternatives for the four criteria (performance, feasibility, reliability, cost) is summarized in Figure ES-9. Values of 1 through 4 were assigned for each treatment alternative in each criteria category (1 was best; 4 worst). Because performance for lead reduction was the main criteria, it was given a weight of 2. Each of the other criteria was given a weight of 1.

Orthophosphates were ranked highest overall. Zinc orthophosphate was second, mainly because of its adverse effects on industry, wastewater plant operations, and higher costs. pH adjustment was ranked lowest because it is less effective for lead reduction, less reliable, and demonstrates more adverse effects on industry and drinking water regulatory compliance.

Orthophosphates were selected as the optimal treatment alternative for full-scale lead corrosion control.

Based on corrosion control theory, comparison with analogous water systems, and the extensive pilot plant studies, orthophosphates were selected as the optimal treatment alternative for full-scale lead corrosion control.

Figure ES-9
Alternatives Ranking by Criteria

Treatment	Evaluation Criteria				
	Performance wt.= 2	Feasibility wt.= 1	Reliability wt.= 1	Cost wt.= 1	Weighted
Phosphoric Acid	2	1	1	1	7
Zinc Orthophosphate	1	4	2	3	11
pH 8.1	4	2	3	2	15
pH 8.7	3	3	4	4	17

Legend: 1 = Best; 4 = Worst

Phosphoric acid is the recommended form of adding orthophosphate. It is a generic chemical and can be bid competitively. It does not add sodium to the water and costs less than any other form of orthophosphate. In addition, the finished water pH is already in the optimal range for lead solubility reduction by phosphates, so pH adjustment is not required.

The recommended dose of phosphoric acid is 1.2 mg/L as P for initial passivation and a sustained dose of 0.4 mg/L as P for maintaining control of lead uptake. Values may be adjusted based on full-scale results.

Full-Scale Implementation

The LCR requires optimal corrosion control treatment installation by January 1, 1997. To meet this deadline, the implementation schedule in Figure ES-10 is proposed. The first element of implementation is to conduct full-scale demonstration testing in the distribution system served by one of the WTPs before installing chemical feed facilities in the other four plants. Operation of lead corrosion control facilities at all plants is planned for May 1996. This will provide additional time to optimize the system before lead monitoring is required in 1997.

The chemical equipment required for each WTP is summarized in Table ES-1. A schematic of a typical liquid chemical system is shown in Figure ES-11.

The cost of lead corrosion control chemicals is estimated to be about $0.87 per year per household.

The estimated capital cost for corrosion control facilities at the five WTPs is $3,740,000. The estimated cost of chemicals is $868,000 per year. The cost of lead corrosion control chemicals is estimated to be about $0.87 per year per household.

A monitoring program will be established before and after corrosion control treatment is implemented to determine performance for lead reduction and effects on other water quality parameters. If lead is reduced to below the EPA AL of 0.015 mg/L for two consecutive 6-month monitoring periods, other methods of lead reduction, such as removing lead service lines, will not be required.

If the lead AL is still exceeded after optimization and stabilization, a program for lead service line removal should be developed in addition to an ongoing public education program.

Operation of lead corrosion control facilities at all plants is planned for May 1996.

Figure ES-10
Implementation Schedule

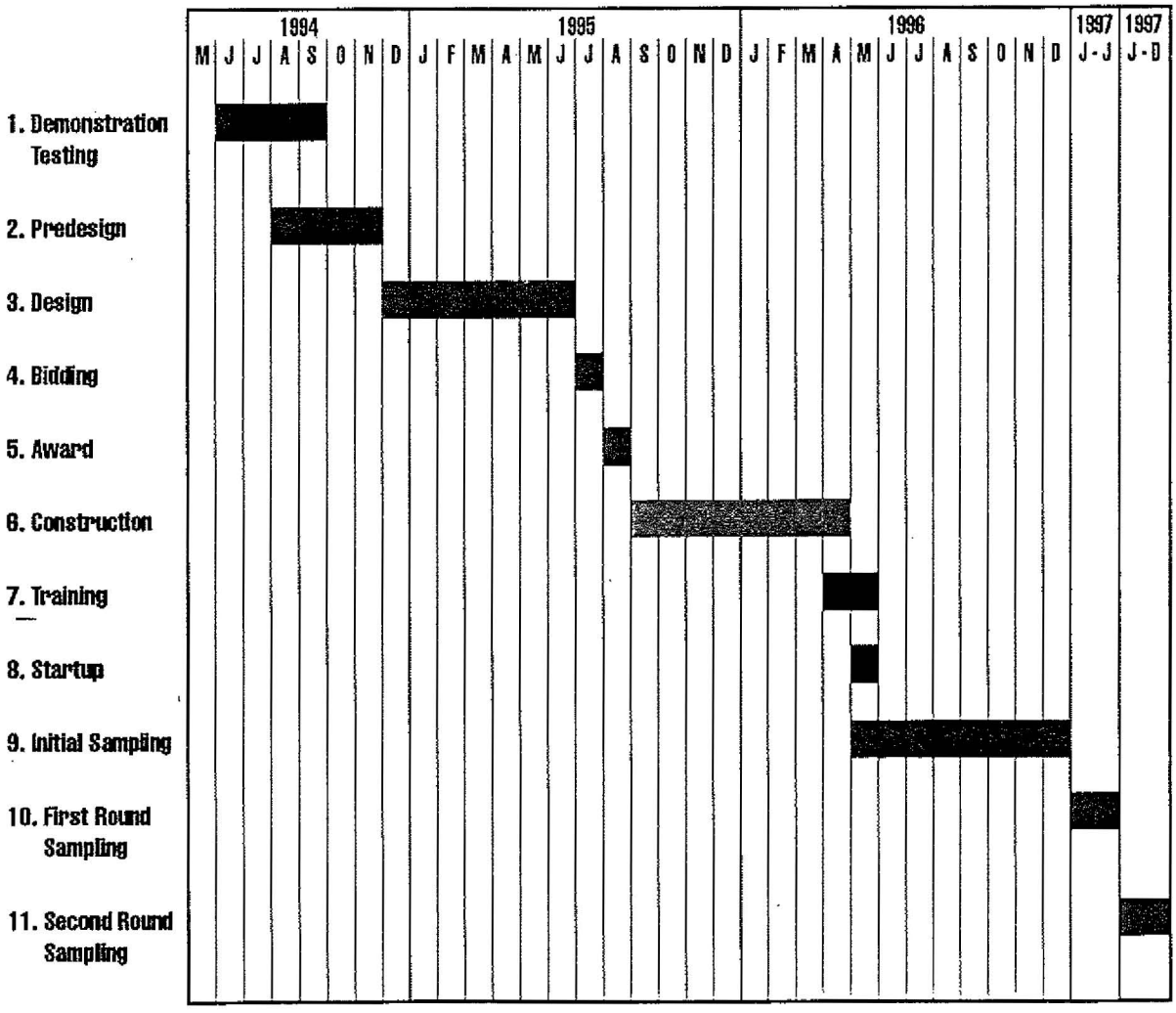
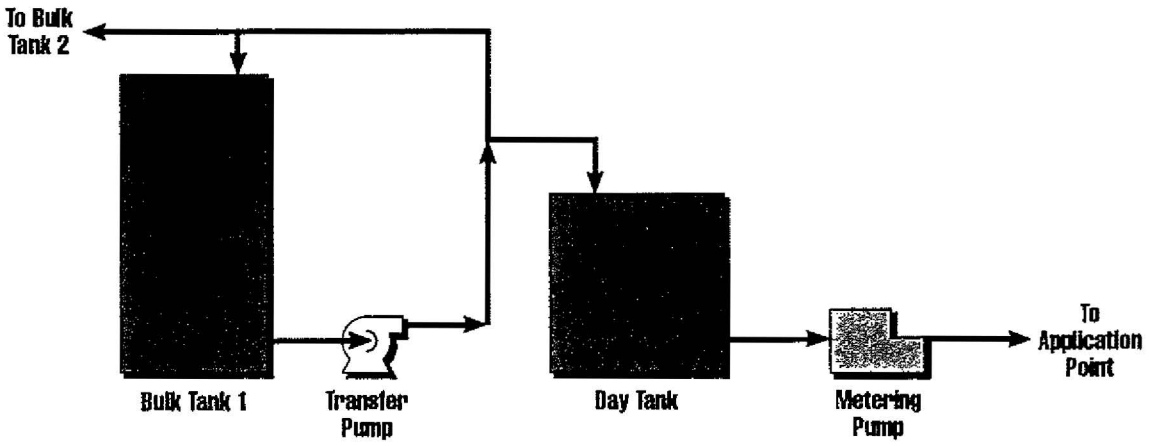


Table ES-1
Chemical Equipment Summary

	Southwest Water Plant	Water Works Park Water Plant	Northeast Water Plant	Springwells Water Plant	Lake Huron Water Plant
Number of bulk tanks	2	2	2	2	2
Bulk tank capacity, each (gal)	4,000	4,000	4,000	6,000	4,000
Number of day tanks	1	1	1	1	1
Day tank capacity (gal)	200	200	200	400	200
Number of feeders	3	3	3	3	3
Feeder capacity, each (gpd)	1 @ 200 2 @ 650	1 @ 300 2 @ 650	1 @ 250 2 @ 800	1 @ 600 2 @ 1,500	1 @ 350 2 @ 650
Number of transfer pumps	2	2	2	2	2
Transfer pump capacity each (gpm)	15	15	15	30	15

Figure ES-11
Liquid Chemical System Schematic



City of Flint Lead and Copper Rule Monitoring History						
Monitoring Period	90th Percentile (parts per billion)	Number of Samples above 15 ppb	Samples Required	Samples Collected	Required Frequency	
Jan. - June 2015	11 ppb	6	60	68		*Unofficial
July - Dec. 2014	6 ppb	2	100	100	6 months	
New Source and Treatment - Flint River and Flint WTP						
June - Sept. 2011	0 ppb	0	23	23	3 years	
June - Sept. 2008	0 ppb	0	33	33	3 years	
June - Sept. 2005	1.4 ppb	0	33	33	3 years	
June - Sept. 2002	4 ppb	1	33	33	3 years	
June - Sept. 2001	4.4 ppb	0	33	33	1 year	
June - Sept. 2000	7 ppb	2	33	33	1 year	
Jan. - June 1999	5 ppb	0	33	33	1 year	
July - Dec. 1998	7.4 ppb	1	33	33	6 months	
July - Dec. 1997	5 ppb	1	33	33	6 months	
Jan. - June 1997	4.5 ppb	1	33	33	6 months	
DWSD Study and OCC Treatment						
July -Dec. 1992	14.4 ppb	3	33	33	6 months	
Jan. - June 1992	15 ppb	4	33	33	6 months	

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

Vernice Davis Anthony, Director

March 15, 1993

City of Flint
1101 South Saginaw Street
Flint, Michigan 48502

WSSN: 2310

Attention: Mr. Charles Smith, Utilities Superintendent

Subject: Lead/Copper Monitoring

Gentlemen:

We have reviewed the results of the second round of the lead and copper monitoring completed for your water supply for the period of July 1, 1992, through December 31, 1992. The samples were collected and analyzed to comply with the U.S. Environmental Protection Agency's Lead and Copper Regulation. The action levels specified in the regulation require that the 90th percentile results from the distribution system samples for lead and copper not exceed 15 and 1300 ug/l, respectively.

Since the 90th percentile lead level for your water system is 14.4 ug/l, the lead action level of 15 ug/l has not been exceeded. Also, the 90th percentile copper level was significantly below the copper action level of 1300 ug/l. This means that your water system has met both action levels for the first two monitoring periods.

Although many of the Detroit Water and Sewerage Department (DWSD) customers have met the action levels, DWSD is required to conduct a study to determine whether their water treatment processes can be improved to further reduce corrosion. The study is to be completed by July 1, 1994, and any recommended treatment modifications must be in place by January 1, 1997.

RECYCLED PAPER

Further monitoring of your water system for lead and copper will not be required until the DWSD study is complete and any additional corrosion control treatment has begun. We will inform you when monitoring is again required. This may be as late as January 1997.

If you have any questions, please call me at (517) 335-8309.

Sincerely,

Timothy A. Benton, P.E.
District Engineer
Division of Water Supply
Bureau of Environmental and
Occupational Health

TAB:im
cc: John Weisenberger, Water Plant Supervisor
cc: Genesee County Health Department

From:	Wurfel, Brad (DEQ)
Sent:	Wednesday, September 09, 2015 9:13 PM
To:	Wyant, Dan (DEQ)
Cc:	Pallone, Maggie (DEQ); Brown, Eric (GOV); Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Subject:	Fwd: Congressman Kildee Letter on Lead in Flint Water
Attachments:	ATT00001.htm; ATT00002.htm; ATT00003.htm; image004.png; ATT00004.htm; 2015-09-09- Congressman Kildee Letter on Lead in Flint Water.pdf; ATT00005.htm

Heads up. Flint water Comms from cong. Kildee.

Sent from my iPhone

Begin forwarded message:

> **From:** "Dickinson, Jordan" <jordan.Dickinson@mail.house.gov>
> **Date:** September 9, 2015 at 6:54:47 PM EDT
> **To:** "Wurfelb@michigan.gov" <Wurfelb@michigan.gov>
> **Subject: FW: Congressman Kildee Letter on Lead in Flint Water**
>
> Hi Brad,
>
> Can you please make sure the attached letter is passed along to Director Wyant? I will forward along a physical copy in the mail.
>
> Thank you,
>
> **Jordan Dickinson**
> Legislative Assistant
> Congressman Dan Kildee (MI-05)
> 227 Cannon House Office Building
> Washington, D.C. 20515
> Phone: (202) 225-3611
> www.dankildee.house.gov

DANIEL T. KILDEE
5TH DISTRICT, MICHIGAN

COMMITTEE ON
FINANCIAL SERVICES

SUBCOMMITTEE ON
HOUSING AND INSURANCE

SUBCOMMITTEE ON
MONETARY POLICY AND TRADE

SENIOR WHIP

DEMOCRATIC POLICY AND
COMMUNICATIONS COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515

September 9, 2015

WASHINGTON OFFICE

227 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-3611
(202) 225-6393 (FAX)

DISTRICT OFFICE

111 EAST COURT STREET #3B
FLINT, MI 48502
(810) 238-8627
(810) 238-8658 (FAX)

WWW.DANKILDEE.HOUSE.GOV
/REPDANKILDEE
@REPDANKILDEE

Ms. Gina McCarthy
Administrator
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Mr. Dan Wyant
Director
Michigan Department of Environmental Quality
P.O. Box 30473
Lansing, MI 48909

Administrator McCarthy and Director Wyant:

The attached June 24, 2015, memorandum between two Environmental Protection Agency (EPA) employees, Miguel A. Del Toral and Thomas Poy, published recently by the American Civil Liberties Union of Michigan, suggests that there are high lead levels in the city of Flint, Mich., water transmission lines. Furthermore, this document reflects that children consuming this water had levels of lead in their blood in excess of three times what they were prior to the city of Flint switching its source water from the Detroit Water and Sewage Department (DWSD) to the Flint River.

In addition, this memorandum makes recommendations to Mr. Poy, Chief of the Ground Water and Drinking Water Branch of EPA Region 5, to do three things. First, for the EPA to work with the Michigan Department of Environmental Quality (MDEQ) to provide technical assistance to the city of Flint to deal with water quality issues. Second, it suggests the EPA review the compliance status of the city of Flint in respect to its compliance with the Lead and Copper Rule (LCR). Third, the memorandum recommends that the EPA conduct a review of the city of Flint testing procedures to ensure they are compliant with the LCR.

Regarding this memorandum and the surrounding water quality issues in the city of Flint, I have the following questions:

- Was this memorandum actually sent to Mr. Poy?

- Are the findings in the memorandum regarding the lead levels in the city of Flint water accurate?

- If there were in fact high levels of lead in the water in the city of Flint, when did the EPA and/or MDEQ plan to alert the public?

- What, if any, of the recommendations has the EPA followed from the memorandum?

- Given the demonstrated level of lead in the water in Flint, MI, is the water safe?

Regardless, I am very troubled by recent tests suggesting high levels of lead in the city of Flint's water system. As you know, on the EPA's website it says that lead above the "action level" in drinking water can cause a variety of adverse health effects, including delays in physical and mental development in babies and children.

According to the Safe Drinking Water Act, the EPA has the responsibility of enforcing water quality standards. EPA, however, has given the primary responsibility of enforcing water quality standards to the state of Michigan via MDEQ. As such, it is the responsibility of these agencies to ensure that the people of the city of Flint have safe drinking water.

Thank you and I look forward to hearing from you soon.

Sincerely,

Dan Kildee
MEMBER OF CONGRESS

cc:

State Senator Jim Ananich
State Representative Sheldon Neeley
State Representative Phil Phelps
Mayor Dayne Walling, City of Flint
Howard Croft, City of Flint
Susan Hedman, EPA
Thomas Poy, EPA
Michael Schock, EPA-ORD
Darren Lytle, EPA-ORD
Denise Fortin, EPA
Liane Shekter-Smith, MDEQ
Pat Cook, MDEQ
Stephen Busch, MDEQ
Brad Wurfel, MDEQ
Marc Edwards, Virginia Tech

From: Adamczyk, Lynne (GOV)
Sent: Wednesday, September 16, 2015 3:19 PM
To: Clayton, Stacie (GOV); Kennedy, Jordan (GOV); Rospond, Laurie (GOV); Brown, Eric (GOV); Dempkowski, Angela (Treasury); Pleyte, Beth (Treasury); Wurfel, Brad (DEQ); Pallone, Maggie (DEQ); Grijalva, Nancy (DCH); Thelen, Mary Beth (DEQ); Doyle, Maureen (Treasury); Minix, Connie (DTMB)
Subject: Document for Review - Flint Water Plan Support
Attachments: Additional Support for Flint Water Improvement Plan, 9.14.15.pdf

Stacie, please have Harvey respond to this letter from Mayor Walling and send me a copy of the response letter.

Thanks,

Lynne

Lynne Adamczyk
Executive Assistant
Office of Governor Rick Snyder
517-373-3400 (o)
[redacted]
adamczykl@michigan.gov

CITY OF FLINT

Dayne Walling
Mayor

September 14, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Call for Additional Support for Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing with a renewed request for additional support to address Flint's water challenges to ensure that water is affordable and secure for everyone in Flint especially our vulnerable populations. I am asking for an additional $30 million in funds for Flint's infrastructure and a new healthy homes initiative.

Significant progress has been made throughout this year to increase water safety and quality and I thank you for the involvement of your office, the Michigan Department of Environmental Quality, and the Michigan Department of Treasury. A majority of items in the Water Improvement Plan are completed or underway. Most importantly, Flint is now in compliance with the Safe Drinking Water Act due in large part to the installation of the new carbon filter. The infrastructure systems are being made more secure and efficient through the State grants. Now the City is committed to following the recommendation of the Michigan Department of Environmental Quality to optimize the treatment process, reduce corrosion and further minimize risks from lead.

The need to accelerate the City's capital improvement investments remains and has been further increased by the continued financial stress and legal issues. Previously I requested support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community and the gap in funding in the adopted capital improvement plan. I understand that the existing federal law does not allow the existing Drinking Water Revolving Loans that Flint is carrying to be forgiven in retrospect but the need still exists. Flint owes approximately $20 Million. One solution is for the State to grant a new $20 Million that is designed as forgivable from the start. Another solution is to provide

City of Flint • 1101 S. Saginaw Street • Flint, Michigan 48502
www.cityofflint.com • (810) 766 - 7346 • Fax: (810) 766 - 7218

equivalent funding through an expansion of the grant program to Michigan's Financially Distressed Cities, Villages and Townships with a supplemental budget amendment in cooperation with the State Legislature.

The community's heightened concern about lead leeching into the water from old service lines and home plumbing also needs to be addressed. We know that lead is an environmental contaminant and there have been many programs in place over the years to address sources in paint and pipes. Flint needs a new healthy homes initiative specifically focused on lead in water with $10 Million to start the process of replacing service lines for the most vulnerable households. Regardless of the source and treatment of Flint's water, this long term threat of lead in pipes needs to be removed in the interest of public health.

My approach continues to be to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and State and Federal government personnel. We need every available expert and resource to address Flint's water problems.

Flint's safety is my top priority. Just as the City and State have worked together on public safety, we need additional support for fixing the water problems. We need $30 Million in new funds to repair and update the city-wide infrastructure and to assist households in becoming lead-free. The entire Flint community deserves sustainable, safe, secure and affordable water now and into the future. Thank you for the consideration Governor and I look forward to future discussions.

Sincerely,

Dayne Walling
Mayor, City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; EPA Regional Administrator Dr. Susan Hedman; Chief of Staff Dennis Muchmore

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 16, 2015 4:27 PM
To: Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Brown, Eric (GOV)
Cc: Brown, Jessica (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Kildee Response re Flint Water
Attachments: Kildee Response re Flint Water.docx

Here is DEQ's formal response to the congressional inquiry on Flint water. FYI. Going out COB today. Call me if you have questions or issues.
b

From: Feuerstein, Heather (DEQ)
Sent: Wednesday, September 16, 2015 4:23 PM
To: Wurfel, Brad (DEQ)
Subject: Kildee Response re Flint Water

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 16, 2015

VIA E-MAIL

The Honorable Daniel Kildee
United States House of Representatives
Washington, DC 20515

Dear Congressman Kildee:

Thank you for your September 9, 2015, letter regarding your concerns for the drinking water in the city of Flint (Flint). The Michigan Department of Environmental Quality (MDEQ) is working closely with Flint's water department as well as the U.S. Environmental Protection Agency (USEPA) to ensure Flint residents have ample water that meets state and federal drinking water standards.

The MDEQ's role is to administer its nearly 40-year-old state drinking water protection program based on federal guidelines. The MDEQ works with approximately 11,500 public water systems in the state to monitor for more than 90 primary drinking water contaminants and ensure that every supply consistently provides safe drinking water.

In Flint, the city made a decision 18 months ago to switch drinking water sources. This change required them to take specific measures under the federal Lead and Copper Rule, which was enacted in 1991 to monitor water as it interacts with lead service connections and home plumbing. Flint's test results were conducted according to the same testing protocols every Michigan community uses and the same protocols Flint has used to test its water every three years for the past 25 years.

While the results from Flint's testing show compliance with the federal action level for lead and copper, on August 17, 2015, the MDEQ instructed the city to move forward expeditiously with developing additional corrosion control treatment to minimize the corrosive effects between drinking water and lead service connections and home plumbing in the Flint service area.

We appreciate and share your concern for the situation, and the MDEQ looks forward to providing you a detailed briefing next week. If you have any additional questions in the meantime, please contact Ms. Maggie Pallone, Deputy Director, Policy and Legislative Affairs, at 517-284-6704 or pallonem@michigan.gov; or you may contact me.

Sincerely,

Dan Wyant
Director

517-284-6700

cc: Senator Jim Ananich
Representative Sheldon Neeley
Representative Phil Phelps
Mayor Dayne Walling, City of Flint
Mr. Howard Croft, City of Flint
Dr. Susan Hedman, Regional Administrator, USEPA, Region 5
Mr. Thomas Poy, USEPA, Region 5
Ms. Denise Fortin, USEPA, Region 5
Mr. Michael Schock, USEPA
Mr. Darren Lytle, USEPA
Mr. Marc Edwards, Virginia Tech
Mr. Harvey Hollins, Governor's Southeast Michigan Office
Mr. Bill McBride, Governor's Washington Office
Mr. Eric Brown, Governor's Washington Office
Mr. Jim Sygo, Chief Deputy Director, MDEQ
Ms. Madhu R. Anderson, Deputy Director, MDEQ
Ms. Maggie Pallone, Deputy Director, MDEQ
Ms. Sarah M. Howes, Legislative Liaison, MDEQ
Mr. Brad Wurfel, Communications Director, MDEQ
Ms. Liane Shekter Smith, MDEQ
Mr. Stephen Busch, MDEQ
Mr. Pat Cook, MDEQ

From: Pallone, Maggie (DEQ)
Sent: Thursday, September 17, 2015 10:09 AM
To: Brown, Eric (GOV); fortin.denise@epa.gov
Subject: Fwd: Briefing for elected officials on Flint water

FYI

Begin forwarded message:

> **From:** "Mathis, Derrick (Stabenow)" <Derrick_Mathis@stabenow.senate.gov>
> **Date:** September 17, 2015 at 9:54:39 AM EDT
> **To:** "'PalloneM@michigan.gov'" <PalloneM@michigan.gov>
> **Subject: Briefing for elected officials on Flint water**
>
> Good morning Maggie,
>
> I would like to RSVP for the Monday morning briefing on Flint water for myself and Teresa Plachetka.
>
> If you have any questions, please don't hesistate to reach out.
>
> Derrick Mathis
> Regional Manager
> Office of Senator Debbie Stabenow
> 432 N. Saginaw Street, Suite 301
> Flint, Michigan 48502
> P: [redacted]
> F: 810-720-4178

From: Pallone, Maggie (DEQ)
Sent: Thursday, September 17, 2015 1:55 PM
To: Clayton, Stacie (GOV); Hollins, Harvey (GOV); Wurfel, Brad (DEQ); Brown, Eric (GOV)
Subject: RE: Conf Call on Friday

Here is the agenda that Director Wyant is proposing:

DEQ update on Flint water and elected officials briefing
Dennis Muchmore update
Harvey Hollins update
Treasury update
DHHS update
Action steps going forward (DEQ)

Thanks
Maggie

From: Clayton, Stacie (GOV)
Sent: Thursday, September 17, 2015 12:07 PM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Pallone, Maggie (DEQ) <PalloneM@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: Conf Call on Friday

Greetings All,

Please let me know if there an agenda or other materials that the group will need for the conference call on Friday morning at 8:00am. I can send it to everyone this afternoon.

Stacie

313.456.4994 (office)
claytons3@michigan.gov

From: Pallone, Maggie (DEQ)
Sent: Thursday, September 17, 2015 3:55 PM
To: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Brown, Eric (GOV); Ackerman, Darin (GOV)
Cc: Wurfel, Sara (GOV); Brown, Jessica (GOV)
Subject: Ananich Flint Water Response
Attachments: Flint Water Response.pdf

Here is DEQ's formal response to the Michigan legislators inquiry on Flint water. FYI only, this is going out momentarily. We are also briefing them in person on Monday morning.
Give me a call if you have any questions.
Thanks,
Maggie

From: Feuerstein, Heather (DEQ)
Sent: Thursday, September 17, 2015 3:48 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
Subject: Flint Water Response

Here is the letter to Senator Ananich and Reps Neeley and Phelps.

Heather Feuerstein
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 17, 2015

VIA E-MAIL

The Honorable Jim Ananich
State Senator
State Capitol
P.O. Box 30036
Lansing, Michigan 48909-7536

The Honorable Sheldon Neeley
State Representative
State Capitol
P.O. Box 30014
Lansing, Michigan 48909-7514

The Honorable Phil Phelps
State Representative
State Capitol
P.O. Box 30014
Lansing, Michigan 48909-7514

Dear Senator Ananich and Representatives Neeley and Phelps:

Thank you for your letter of September 10, 2015, regarding water quality in the city of Flint (City). Your interest in this matter is appreciated. The Michigan Department of Environmental Quality (MDEQ) takes seriously its responsibility to ensure safe drinking water for all Michigan residents. The MDEQ maintains a robust public water supply regulatory program through long-standing partnerships with the United States Environmental Protection Agency (USEPA) and the state's regulated public water systems.

With respect to the draft memo referenced in your letter, the MDEQ does not review or receive draft memos from the USEPA, nor would we expect to while it is a draft.

Regulations associated with lead, copper, and corrosion control require communities to monitor water quality at customer taps. The monitoring protocols for sampling home water attempt to represent actual home water use, and they allow the MDEQ to get consistent results for year-over-year comparisons.

It is important to recognize that any home with lead plumbing or service connections will impart some amount of lead to water samples. While the compliance monitoring for lead in the City has not exceeded the federally-established Action Level, either before or after the City switched sources and treatment methods, there has always been

detectable lead in the City's water sampling program for homes that have lead plumbing or service connections. The City's monitoring program's purpose is to show aggregated levels throughout the entire system, not individual home levels.

The law requires the City to provide individual lead results to customers whose homes are sampled for compliance with the Action Level. Each customer with an individual sample result that exceeds 15 parts per billion is provided information on actions they can take to limit lead exposure in their drinking water. System-wide results from the most recent lead compliance monitoring are included each year in the City's annual Consumer Confidence Report, which is provided to customers and available online.

It is important to note that the City performed extensive home water tests for lead and copper last year and this year, and is meeting state and federal drinking water standards. Local health departments also administer annual blood level testing on children in Flint; results show no discernable rise in levels that might be expected if there was an elevated lead level in the City water supply. The City currently has no unresolved violations of state and federal drinking water standards.

The MDEQ continues to work with the City and federal regulators on the shared goal of ensuring safe, reliable drinking water in this community.

I look forward to discussing this issue in greater detail at the meeting next week. If you should have additional questions before then, please contact Ms. Maggie Pallone, Deputy Director, Policy and Legislative Affairs, at 517-284-6715 or pallonem@michigan.gov; or you may contact me.

Sincerely,

Dan Wyant
Director
517-284-6700

cc: U.S. Representative Dan Kildee
Mayor Dayne Walling, City of Flint
Mr. Howard Croft, City of Flint
Dr. Susan Hedman, Regional Administrator, USEPA, Region 5
Mr. Thomas Poy, USEPA, Region 5
Ms. Denise Fortin, USEPA, Region 5
Mr. Michael Schock, USEPA
Mr. Darren Lytle, USEPA
Mr. Marc Edwards, Virginia Tech
Mr. Harvey Hollins, Governor's Southeast Michigan Office
Mr. Bill McBride, Governor's Washington Office
Mr. Eric Brown, Governor's Washington Office
Mr. Jim Sygo, Chief Deputy Director, MDEQ
Ms. Madhu R. Anderson, Deputy Director, MDEQ
Ms. Maggie Pallone, Deputy Director, MDEQ
Ms. Sarah M. Howes, Legislative Liaison, MDEQ
Mr. Brad Wurfel, Communications Director, MDEQ
Ms. Liane Shekter Smith, MDEQ
Mr. Richard Benzie, MDEQ
Mr. Stephen Busch, MDEQ
Mr. Pat Cook, MDEQ

From: Pallone, Maggie (DEQ)
Sent: Thursday, September 17, 2015 9:52 PM
To: fortin.denise@epa.gov; Brown, Eric (GOV)
Subject: Fwd: Briefing for elected officials on Flint water

FYI

Begin forwarded message:

> **From:** "Dickinson, Jordan" <Jordan.Dickinson@mail.house.gov>
> **Date:** September 17, 2015 at 9:50:10 PM EDT
> **To:** "Pallone, Maggie (DEQ)" <PalloneM@michigan.gov>
> **Subject: RE: Briefing for elected officials on Flint water**
>
> Hi Maggie,
>
> Congressman Kildee, Amy Hovey and myself will be attending.
>
> Thank you,
>
> Jordan
>
> ---
>
> **From:** Pallone, Maggie (DEQ) [mailto:PalloneM@michigan.gov]
> **Sent:** Wednesday, September 16, 2015 3:32 PM
> **To:** amglasson@house.mi.gov; Neeley, Rep Sheldon; Phelps, Rep Phil; Michelle Carnevale; Andrew Leavitt; Dickinson, Jordan; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters)
> **Cc:** Fortin.Denise@epa.gov; Brown, Eric (GOV)
> **Subject:** RE: Briefing for elected officials on Flint water
>
> I apologize that I didn't include information for a call in number in the first email. For those that will be calling in the information is below. Please let me know if you will be calling in as well.
>
> [redacted]
> Access code: [redacted]
>
> Thank you,
> Maggie
>
> ---
>
> **From:** Pallone, Maggie (DEQ)
> **Sent:** Wednesday, September 16, 2015 3:25 PM
> **To:** 'amglasson@house.mi.gov' <amglasson@house.mi.gov>; Neeley, Rep Sheldon <SheldonNeeley@house.mi.gov>; Phelps, Rep Phil <repphelps@house.mi.gov>; 'Michelle Carnevale' <MCarnevale@senate.michigan.gov>; 'Andrew Leavitt' <ALeavitt@senate.michigan.gov>; 'Dickinson, Jordan' <Jordan.Dickinson@mail.house.gov>; 'Bill_Sweeney@stabenow.senate.gov' <Bill_Sweeney@stabenow.senate.gov>; 'Anne_Stanski@stabenow.senate.gov' <Anne_Stanski@stabenow.senate.gov>; 'eric_feldman@peters.senate.gov'

<eric_feldman@peters.senate.gov>; 'angeli_chawla@peters.senate.gov' <angeli_chawla@peters.senate.gov>; 'Johnson, Bentley (Peters)' <Bentley_Johnson@peters.senate.gov>
Cc: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Lange, Michelle (GOV) <LangeM3@michigan.gov>; Ackerman, Darin (GOV) <ackermand3@michigan.gov>; Thelen, Mary Beth (DEQ) <THELENM2@michigan.gov>; Fortin.Denise@epa.gov; Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: Briefing for elected officials on Flint water

Senator Stabenow, Senator Peters, Congressman Kildee, Senator Minority Leader Ananich, Representative Phelps and Representative Neeley-
Thank you for your interest in the role of EPA and the State of Michigan in delivering clean, safe water to the residents of Flint. The Michigan DEQ and EPA Region V will be hosting a briefing for elected officials on Flint water Monday, September 21st at 9 AM. The meeting will be at Constitutional Hall (525 W. Allegan St, Lansing, MI).

Tinka Hyde, Director of the Water Division at EPA Region V, and DEQ Director Dan Wyant will provide an overview of our programs and will answer any questions you have.

Please let me know if you, or your staff, will be attending the meeting at your earliest convenience.

Thank you,

Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted]
PalloneM@michigan.gov

From: Feuerstein, Heather (DEQ)
Sent: Monday, September 21, 2015 10:40 AM
To: Brown, Eric (GOV)
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: Additional Flint Water Document
Attachments: Flint Water Infographic.pdf

Eric, this is an additional document that was discussed at the Flint Water briefing this morning.

Thanks!
Heather Feuerstein
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

DRINKING WATER - LEAD - DISTRIBUTION OF RESPONSIBILITIES

Environmental Protection Agency

1. Promulgation of Federal Safe Drinking Water Act Rules
2. 1974 Safe Drinking Water Act
   - 1991 Lead and Copper Rule
   - 2000 Lead and Copper Rule Minor Revisions
   - 2007 Lead and Copper Rule Short Term Revisions
   - ???? Lead and Copper Rule Long Term Revisions
3. Granting Primacy of Federal Regulations to States
4. Auditing of State Public Water Supply Programs
5. Provide Funding to States

Michigan Department of Environmental Quality

1. Primacy - Michigan Safe Drinking Water Act and Administrative Rules
2. Oversight of public water systems
3. Inspections
4. Construction Permitting
5. Provide loans to water systems for public infrastructure improvements
6. State Laboratory Services
7. Laboratory Certification
8. Establish monitoring requirements, quantity and frequency
9. Verification of monitoring results and compliance determination
10. Notify water systems of Action Level Exceedance
11. Establish Water Quality Parameter Ranges, as necessary
12. State Reporting to EPA
13. Operator Training and Certification

City of Flint Water Customers

1. Certified Operation of public water system
2. Establish Water Rates
3. Obtain construction permits
4. Reporting to MDEQ
5. Coordination of lead and copper sampling
   - Establishing a Tiered Sampling Pool
   - Providing Sampling Kits and Instructions to customers
   - Obtain signed statements from participating customers
   - Obtain sample analysis
   - Provide individual lead sample result to participants
   - Comply with Action Levels for lead and copper
   - Provide lead monitoring and notice Certification to MDEQ
6. Provide Annual Report (CCR) to all customers
7. Conduct Water Quality Parameter Monitoring
8. Recommend and Install Optimized Corrosion Control Treatment
9. Provide Public Notification, as necessary
10. Replace public portion of lead service, as necessary

Water Customers

1. Participate in lead sampling as requested
2. Request lead testing if concerned
3. Follow lead sampling Instructions
4. Provide signed information on how sample was collected
5. Review individual result material
6. Follow instructions for reducing lead exposure
7. Replace private leaded service line and plumbing materials with lead-free products
8. Obtain plumbing permits and comply with code requirements
9. Pay Water Bills
10. Read Annual Report (CCR)
11. Read and follow Public Notification materials

From: Wurfel, Brad (DEQ)
Sent: Monday, September 21, 2015 4:52 PM
To: Brown, Eric (GOV); Muchmore, Dennis (GOV)
Cc: Murray, David (GOV)
Subject: FW: STATEMENT: Congressman Dan Kildee Calls For Additional "Independent and Scientific" Testing to Ensure Safety of Flint's Water

Heads up. Flint journal asked for comment on Kildee statement.

b

From: Wurfel, Brad (DEQ)
Sent: Monday, September 21, 2015 4:48 PM
To: 'Ronald Fonger'
Subject: RE: STATEMENT: Congressman Dan Kildee Calls For Additional "Independent and Scientific" Testing to Ensure Safety of Flint's Water

"The state much appreciated the opportunity to explain its role in regulating drinking water systems – in particular, the fact that the water supply presently meets all state and federal water quality standards but that homes with lead service connections and lead plumbing are and always have been imparting some part-per-billion of lead, which is a concern.

"We were pleased to conclude the meeting with the shared commitment to bring a local, state and federal partnership to address this issue through the City's technical advisory team. Given issues like the proposed federal grant forgiveness or the call for system-wide replacement of home lead connections to address the long-term issue, the leadership of our congressional delegation will be of critical importance."

b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, September 21, 2015 3:13 PM
To: Wurfel, Brad (DEQ)

Subject: FW: STATEMENT: Congressman Dan Kildee Calls For Additional "Independent and Scientific" Testing to Ensure Safety of Flint's Water

Brad: Do you want to comment?

I just got this and have to file something by 5-530.

Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Rivard, Mitchell [mailto:Mitchell.Rivard@mail.house.gov]
Sent: Monday, September 21, 2015 3:02 PM
To: Rivard, Mitchell
Subject: STATEMENT: Congressman Dan Kildee Calls For Additional "Independent and Scientific" Testing to Ensure Safety of Flint's Water

FOR IMMEDIATE RELEASE
Monday, September 21, 2015

Contact: Mitchell Rivard, 202-595-4885, mitchell.rivard@mail.house.gov

Congressman Dan Kildee Calls For Additional "Independent and Scientific" Testing to Ensure Safety of Flint's Water

FLINT – Congressman Dan Kildee (MI-05) today, as part of his continued efforts to get answers regarding recent lead levels recorded in the city of Flint's water system, met with the Michigan Department of Environmental Quality (DEQ) and the Environmental Protection Agency (EPA) in Lansing.

The meeting followed a letter sent last week by Congressman Kildee posing various questions about recent lead levels in the water. In response to Congressman Kildee's letter, the DEQ and EPA invited Congressman Kildee and other local, state and federal elected officials to attend today's briefing in Lansing.

After the meeting today, Congressman Kildee issued the following statement:

"After meeting with the EPA and DEQ, it is clear to me that immediate independent and scientific testing is necessary to determine the safety of Flint's water. So far, the city, DEQ and EPA have not adequately answered my questions on their testing methods to ensure the safety of Flint's water.

"So far, I have been given no reason to have confidence in the current testing results. For example, it is unclear if homes sampled also took part in previous tests, which could have shown trends in water quality.

"I call on the Michigan Department of Environmental Quality and the Environmental Protection Agency, in coordination with the city of Flint, to work together to conduct additional independent and scientific testing of Flint's water. Additional testing must be expanded from its current scope to include more homes. It must also factor in the most at-risk homes in Flint.

"Flint residents deserve absolute transparency when it comes to the quality of their water. Additionally the city, DEQ and EPA must work together to ensure the immediate safety of Flint's drinking water, including any temporary relief until a long-term solution can be completed."

###

From: Wurfel, Brad (DEQ)
Sent: Thursday, September 24, 2015 6:37 AM
To: Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Brown, Eric (GOV); Brown, Jessica (GOV); Muchmore, Dennis (GOV)
Subject: Fwd: Rep. Neeley Requested Docs
Attachments: Flint lead-copper history.xlsx; ATT00001.htm; 2310FlintCertOpReport2015-09-23.pdf; ATT00002.htm; CWS with L sample categories Periods I-II.docx; ATT00003.htm

b

Sent from my iPhone

Begin forwarded message:

> **From:** "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>
> **Date:** September 23, 2015 at 4:52:48 PM EDT
> **To:** "Pallone, Maggie (DEQ)" <PalloneM@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
> **Cc:** "Feuerstein, Heather (DEQ)" <FeuersteinH@michigan.gov>
> **Subject: Rep. Neeley Requested Docs**
>
> Attached are what we have put together for Rep. Neeley.
>
> The full lead copper sampling history
>
> List of Certified Operators (Anyone with F certification can be a shift operator at the WTP)
>
> A partial list of community water systems known to have or have had lead service lines. Mostly from SE Michigan. It will take more effort to put together a comprehensive list from around the state.
>
> Stephen Busch, P.E.
> MDEQ Lansing District Coordinator
> Office of Drinking Water and Municipal Assistance
> Lansing and Jackson District Supervisor
> 517-643-2314
> buschs@michigan.gov

City of Flint Lead and Copper History

All results in ppm

| Sample Location | Sample Category | Service Line | Building Plumbing | 33 Required, 33 Taken 1/1 - 6/30/1992 Site Code | Pb | Cu | 33 Required, 33 Taken 7/1 - 12/31/1995 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 1/1 - 6/30/1997 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 1/1 - 12/31/1997 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 7/1 - 12/31/1998 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 1/1 - 6/30/1999 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 1/1 - 6/30/2000 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2000 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2001 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2002 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2003 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2004 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2005 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2006 Site Code | Same Data? | Pb | Cu | 33 Required, 33 Taken 6/1 - 9/30/2008 Site Code | Same Data? | Pb | Cu | 23 Required, 23 Taken 6/1 - 9/30/2010 Site Code | Same Data? | Pb | Cu | 100 Required, 100 Taken 7/1 - 12/31/2014 Site Code | Same Data? | Pb | Cu | 60 Required, 60 Taken 1/1 - 06/30/2015 Site Code | Same Data? | Pb | Cu |
|---|---|---

| | | |

| | | |

CEC Report within Renewal Period - By WSSN

WSSN: 2310
DISTRICT: 11

This application was created using the trial version
of the XtraReports.

OPERATOR: Nicole D. Alexander **OPER ID:** 13291

CERTIFIED: ISSUE DATE: 07/16/2013 EXPIRATION DATE: 07/15/2016

CLASSIFICATION(S) HELD: F-3, S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
03/06/2014	Chlorine Safety Training Seminar	Flint	0.2		
		CEC's Earned:	.2	.0	.0
		Total CEC's Earned: 0.2			

OPERATOR: Jessica E. Ashley **OPER ID:** 18582

CERTIFIED: ISSUE DATE: 11/05/2014 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

OPERATOR: Scott A. Ball **OPER ID:** 18394

CERTIFIED: ISSUE DATE: 11/05/2014 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

OPERATOR: Chris S. Beatenhead **OPER ID:** 18594

CERTIFIED: ISSUE DATE: 11/05/2014 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

This application was created using the trial version of the XtraReports.

OPERATOR: Melissa A. Beckelic **OPER ID:** 14931

CERTIFIED: ISSUE DATE: 10/17/2012 EXPIRATION DATE: 01/15/2016

CLASSIFICATION(S) HELD: F-2, S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
08/04/2015	Basic Environmental Chemistry	on line	1.1		
02/04/2015	Joint Expo	Lansing			0.2
06/19/2013	MDEQ Water Security Tabletop Exercises -	Montrose		0.2	
		CEC's Earned:	1.1	.2	.2
		Total CEC's Earned: 1.5			

OPERATOR: Michael G. Beckley **OPER ID:** 13782

CERTIFIED: ISSUE DATE: 06/01/2015 EXPIRATION DATE: 07/15/2018

CLASSIFICATION(S) HELD: F-4, S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

OPERATOR: Timothy J. Bednarski **OPER ID:** 18595

CERTIFIED: ISSUE DATE: 05/06/2015 EXPIRATION DATE: 07/15/2018

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

This application was created using the trial version of the XtraReports.

OPERATOR: Robert J. Bincsik **OPER ID:** 13784

CERTIFIED: ISSUE DATE: 01/16/2014 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-4, S-1 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
02/04/2015	Joint Expo	Lansing			0.2
02/05/2014	Joint Expo	Lansing			0.2
		CEC's Earned:	.0	.0	.4
		Total CEC's Earned: 0.4			

OPERATOR: Timothy A. Bratton **OPER ID:** 4214

CERTIFIED: ISSUE DATE: 12/18/2013 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
03/06/2014	Chlorine Safety Training Seminar	Flint	0.2		
01/14/2014	Electrical Training: Advanced	Lapeer	0.5		
		CEC's Earned:	.7	.0	.0
		Total CEC's Earned: 0.7			

OPERATOR: Thomas A. Childs **OPER ID:** 12737

CERTIFIED: ISSUE DATE: 05/06/2015 EXPIRATION DATE: 07/15/2018

CLASSIFICATION(S) HELD: F-3 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

OPERATOR: Todd C. Church **OPER ID:** 12192

CERTIFIED: ISSUE DATE: 11/09/2011 EXPIRATION DATE: 01/15/2015

CLASSIFICATION(S) HELD: S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other

This application was created using the trial version of the XtraReports.

CEC's Earned:		.0	.0	.0
Total CEC's Earned:	0.0			

OPERATOR: Jeffrey S. Church **OPER ID:** 12559

CERTIFIED: ISSUE DATE: 04/16/2014 EXPIRATION DATE: 04/15/2017

CLASSIFICATION(S) HELD: S-3 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
06/24/2015	NUCA Excavation Safety & Competent	Flint			0.6
		CEC's Earned:	.0	.0	.6
		Total CEC's Earned: 0.6			

OPERATOR: Scott A. Dungee **OPER ID:** 5550

CERTIFIED: ISSUE DATE: 12/01/2013 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-4, S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
02/04/2015	Joint Expo	Lansing			0.2
03/06/2014	Chlorine Safety Training Seminar	Flint	0.2		
		CEC's Earned:	.2	.0	.2
		Total CEC's Earned: 0.4			

OPERATOR: Donald G. Echlin **OPER ID:** 17279

CERTIFIED: ISSUE DATE: 11/05/2014 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: F-3, S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
02/18/2015	Technical Maintenance for W&WW Treatment	Davison	0.5		
02/04/2015	Joint Expo	Lansing			0.2
		CEC's Earned:	.5	.0	.2
		Total CEC's Earned: 0.7			

This application was created using the trial version
of the XtraReports.

OPERATOR: Michael B. Glasgow **OPER ID:** 13684

CERTIFIED: ISSUE DATE: 01/01/2014 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-1R, F-2, S-3 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
03/06/2014	Chlorine Safety Training Seminar	Flint	0.2		
		CEC's Earned:	.2	.0	.0
		Total CEC's Earned: 0.2			

OPERATOR: Rodney L. Jackson **OPER ID:** 16056

CERTIFIED: ISSUE DATE: 11/06/2013 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-3, S-2 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
03/06/2014	Chlorine Safety Training Seminar	Flint	0.2		
		CEC's Earned:	.2	.0	.0
		Total CEC's Earned: 0.2			

OPERATOR: Christopher J. Koryciak **OPER ID:** 4653

CERTIFIED: ISSUE DATE: 12/01/2013 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-4, S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
03/06/2014	Chlorine Safety Training Seminar	Flint	0.2		
		CEC's Earned:	.2	.0	.0
		Total CEC's Earned: 0.2			

OPERATOR: Matt T. McFarland **OPER ID:** 5575

CERTIFIED: ISSUE DATE: 01/16/2014 EXPIRATION DATE: 01/15/2017

CLASSIFICATION(S) HELD: F-3, S-3 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
12/31/2014	AWWA Membership				0.1
		CEC's Earned:	.0	.0	.1
		Total CEC's Earned: 0.1			

This application was created using the trial version
of the XtraReports.

OPERATOR: Kevin S. McLeod **OPER ID:** 18598

CERTIFIED: ISSUE DATE: 11/05/2014 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

OPERATOR: John M. Monsees **OPER ID:** 3622

CERTIFIED: ISSUE DATE: 07/01/2014 EXPIRATION DATE: 07/15/2017

CLASSIFICATION(S) HELD: F-2, S-1 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
12/31/2014	MRWA Membership				0.1
09/12/2014	MI-AWWA Annual Conference Exhibits	Manistee			0.1
09/12/2014	MI-AWWA Annual Conference Exhibitor	Manistee	0.1		
09/12/2014	MI-AWWA Section Meeting	Manistee	0.6	0.4	0.1
		CEC's Earned:	.7	.4	.3
		Total CEC's Earned: 1.4			

OPERATOR: Jeffrey N. Murray **OPER ID:** 16103

CERTIFIED: ISSUE DATE: 11/09/2011 EXPIRATION DATE: 01/15/2015

CLASSIFICATION(S) HELD: S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

This application was created using the trial version
of the XtraReports.

OPERATOR: Paul O. Simpson **OPER ID:** 4849

CERTIFIED: ISSUE DATE: 01/16/2015 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: S-2 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
06/25/2015	NUCA Excavation Safety & Competent	Flint			0.6
06/11/2015	Confined Space	Flint			0.4
03/20/2015	MRWA Annual Conference	Acme	0.6	0.4	0.1
03/20/2015	Michigan Rural Water Association Annual	Acme			0.1
		CEC's Earned:	.6	.4	1.2
		Total CEC's Earned: 2.2			

OPERATOR: Howard W. Swickard **OPER ID:** 5091

CERTIFIED: ISSUE DATE: 12/16/2012 EXPIRATION DATE: 01/15/2016

CLASSIFICATION(S) HELD: S-2 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
03/20/2015	MRWA Annual Conference	Acme	0.6	0.4	0.1
03/20/2015	Michigan Rural Water Association Annual	Acme			0.1
09/25/2013	Basic Math/Hydraulics	Higgins Lake	1.8		
07/23/2013	Permit Required Confined Space	Flint			0.6
07/10/2013	Arsenic in Drinking Water	Mt Pleasant	0.4		
06/05/2013	NUCA Excavation Safety & Competent	Flint			0.6
05/30/2013	Municipal Safety Day	Mason			0.4
		CEC's Earned:	2.8	.4	1.8
		Total CEC's Earned: 5.0			

OPERATOR: Bobby G. Vaughn **OPER ID:** 14565

CERTIFIED: ISSUE DATE: 02/20/2014 EXPIRATION DATE: 04/15/2017

CLASSIFICATION(S) HELD: S-3 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
		CEC's Earned:	.0	.0	.0
		Total CEC's Earned: 0.0			

This application was created using the trial version
of the XtraReports.

OPERATOR: Christopher C. Wilcox **OPER ID:** 18586

CERTIFIED: ISSUE DATE: 11/05/2014 EXPIRATION DATE: 01/15/2018

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
02/18/2015	Technical Maintenance for W&WW Treatment	Davison	0.5		
		CEC's Earned:	.5	.0	.0
		Total CEC's Earned: 0.5			

OPERATOR: Brent F. Wright **OPER ID:** 3676

CERTIFIED: ISSUE DATE: 07/16/2013 EXPIRATION DATE: 07/15/2016

CLASSIFICATION(S) HELD: F-2, S-3 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
12/31/2014	AWWA Membership	Varies			0.1
04/28/2014	Applied Hydraulics	Lansing	3.0		
01/14/2014	Electrical Training: Advanced	Lapeer	0.5		
12/31/2013	AWWA Membership	Varies			0.1
		CEC's Earned:	3.5	.0	.2
		Total CEC's Earned: 3.7			

OPERATOR: Charles V. Yanta **OPER ID:** 3678

CERTIFIED: ISSUE DATE: 11/09/2011 EXPIRATION DATE: 01/15/2015

CLASSIFICATION(S) HELD: F-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
02/04/2015	Joint Expo	Lansing			0.2
03/06/2014	Chlorine Safety Training Seminar	Flint	0		
06/27/2013	Chlorine Safety Training Seminar	Flint	0.2		
		CEC's Earned:	.2	.0	.2
		Total CEC's Earned: 0.4			

This application was created using the trial version
of the XtraReports.

OPERATOR: Michael J. Young **OPER ID:** 15877

CERTIFIED: ISSUE DATE: 01/16/2012 EXPIRATION DATE: 01/15/2015

CLASSIFICATION(S) HELD: S-4 **WSSN:** 2310 **DISTRICT:** 11

DATE	COURSE	LOCATION	Tech	Mgr	Other
07/24/2013	Permit Required Confined Space	Flint			0.6
07/10/2013	Arsenic in Drinking Water	Mt Pleasant	0.4		
06/05/2013	NUCA Excavation Safety & Competent	Flint			0.6
05/30/2013	Municipal Safety Day	Mason			0.4
		CEC's Earned:	.4	.0	1.6
		Total CEC's Earned: 2.0			

This application was created using the trial version
of the XtraReports.

CWS with L sample categories Periods I & II for Southeast Michigan

Allen Park 0130
Ash Twp. 0245
Bloomfield Twp. 0790
Brownstown 0940
Centerline 1290
Dearborn Heights 1740
Dearborn 1730
Eastpoint 1950
Ecorse 2050
Farmington 2230
Ferndale 2280
Flat Rock 2300
Flint 2310
Garden City 2550
Gibraltar 2630
Grosse Ile 2870
Grosse Pointe Park 2900
Grosse Pointe Woods 2920
Hamtramck 2970
Harper Woods 3020
Hazel Park 3100
Huron Twp. 3320
Inkster 3360
Lincoln Park 3870
Livonia 3930
Madison Heights 4000
Melvindale 4420
Oak Park 4880
Plymouth Twp. 5420
Plymouth 5400
Pontiac 5440
Redford Twp. 5640
River Rouge 5690
Riverview 5710
Rockwood 5750
Romulus 5785
Roseville 5820
Southgate 6170
St. Clair Shores 6280
Taylor 6545
Trenton 6650
Troy 6690
Utica 6760
Warren 6900
Wayne 6950
Westland 7470/7040
Ypsilanti Twp. 7260
Berkley 0630
Beverly Hills 0690

Birmingham 0730
Clawson 1440
Huntington Woods 3310
Lathrup Village 3800
Pleasant Ridge 5390
Royal Oak 5830
Southfield 6160
Greater Genesee County Water Supply Systems 2615
Detroit 1800

Lansing BWL 3760
Bay City 0470

From: Wurfel, Brad (DEQ)
Sent: Friday, September 25, 2015 8:56 AM
To: Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Brown, Eric (GOV); Brown, Jessica (GOV)
Subject: Fwd: Consumer Notice (draft) - city of Flint
Attachments: DRAFT_Lead Advisory.docx; ATT00001.htm

What Flint is proposing to announce today.
b

Sent from my iPhone

Begin forwarded message:

> **From:** "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov>
> **Date:** September 25, 2015 at 8:29:46 AM EDT
> **To:** "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Fields, Maggie (DEQ)" <Fields>
> **Cc:** "Benzie, Richard (DEQ)" <BENZIER@michigan.gov>, "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>
> **Subject: Consumer Notice (draft) - city of Flint**
>
> Brad,
>
> Mr. Howard Kroft from the city of Flint has prepared a draft Public Health Advisory regarding lead in drinking water that he intends to publish today. Mr. Kroft requested us to review the draft advisory and make any revisions as needed. Attached is a copy of the draft advisory along with our tracked changes. If there are any further edits you see fit, let me know. Also, I will be out of the office today after 11am. Thanks.
>
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817

Consumer Awareness Notice ~~Public Health Advisory~~ Regarding Lead in Drinking Water

The City of Flint is issuing a Public Health Advisory for residents to be aware of lead levels in drinking water. While the City ~~is in full compliance with the Federal Safe Drinking Water Act~~ has not exceeded the lead Action Level (15 parts per billion), this advisory is being issued as part of a public information campaign to ensure that everyone takes note that no level of lead is considered safe.

Lead ~~contamination~~ can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes. This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue.

In an effort to minimalize any potential risk, the City of Flint Public Works Department advises the public to take the following precautions:

- Flush water for at least five minutes prior to use.
- Only use cold water for cooking and drinking.
- Have your water tested (see information below).

For more specific questions about lead related issues please visit the Genesee County Health Department website at www.gchd.us . The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. Activities include the city's plan to install corrosion control treatment at the Water Treatment Plant by January 2016.

The City's Utilities Division continues to offer free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

DRAFT

From: Wyant, Dan (DEQ)
Sent: Thursday, October 01, 2015 8:21 PM
To: Muchmore, Dennis (GOV); Lyon, Nick (DHHS); Hollins, Harvey (GOV)
Cc: Wurfel, Brad (DEQ); Brown, Eric (GOV); Pallone, Maggie (DEQ); Wurfel, Sara (GOV)
Subject: Fwd: Flint drinking water
Attachments: Emergency SDWA Petition.pdf; ATT00001.htm

Law suit filed today against EPA. Susan Hedman called off from D.C. Will not be attending press conference.

Sent from my iPhone

Begin forwarded message:

> **From:** "Stanfield, Rebecca" <rstanfield@nrdc.org>
> **Date:** October 1, 2015 at 5:29:48 PM EDT
> **To:** "wyantd@michigan.gov" <wyantd@michigan.gov>
> **Cc:** "Henderson, Henry" <hhenderson@nrdc.org>
> **Subject: Flint drinking water**
>
> Hello Dan: Attached please find our emergency SDWA petition to U.S. EPA regarding the Flint situation. Here's a link to the release: http://www.nrdc.org/media/2015/151001a.asp Henry Henderson, NRDC's Midwest Director is the person to contact about this. He's at hhenderson@nrdc.org and is cc'd here.
>
> Rebecca Stanfield
> Deputy Director
> Midwest Program
>
> Natural Resources
> Defense Council
> 20 N. Wacker Drive, Suite 1600
> Chicago, IL 60606
> T 312.651.7910
> [redacted]
> rstanfield@nrdc.org
> @https://twitter.com/rdstanfieldNRDC
> NRDC.ORG
>
> Please save paper.
> Think before printing.

BEFORE THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Petition for Emergency Action under the Safe Drinking Water Act, 42 U.S.C. § 300i, to Abate the Imminent and Substantial Endangerment to Flint, Michigan Residents from Lead Contamination in Drinking Water

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Submitted on Behalf of Petitioners Coalition for Clean Water, Concerned Pastors for Social Action, Water You Fighting For, Democracy Defense League Water Task Force, Flint Water Study Team, Michigan Nurses Association, NAACP – Michigan State Conference, Michigan Chapter of the National Conference of Black Lawyers, American Civil Liberties Union of Michigan, and the Natural Resources Defense Council

October 1, 2015

Notice of Petition

Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Susan Hedman
Regional Administrator
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Mail Code: R-19J
Chicago, IL 60604-3507

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1. Dominic Adams, *Closing the valve on history: Flint cuts water flow from Detroit after nearly 50 years*, Michigan Live (Apr. 25, 2014)

2. Letter from Darnell Earley, Emergency Manager, to Sue McCormick, Detroit Water & Sewer Department (Mar. 7, 2014)

3. Curt Guyette, *In Flint, Michigan, Overpriced Water is Causing People's Skin to Erupt in Rashes and Hair to Fall Out*, The Nation (July 16, 2015)

4. Wenonah Hauter, *Flint's Brown Water Blues*, Huffington Post (July 10, 2015)

5. Laura Gottesdiener, *Flint, Mich., Residents find state water control hard to swallow*, Al Jazeera America (Apr. 3, 2015)

6. Ron Fonger, *Flint issues boil water advisory for section of the city after positive test result for total coliform bacteria*, Michigan Live (Sept. 5, 2014)

7. Robin Erb, *Who wants to drink Flint's water?*, Detroit Free Press (Jan. 23, 2015)

8. Michigan Department of Environmental Quality, Violation Notice—Maximum Contaminant Level for Total Trihalomethanes (Dec. 16, 2014)

9. U.S. EPA, Basic Information about Disinfection Byproducts in Drinking Water

10. Order Den. Mot. for Prelim. Inj. 1, *Coalition for Clean Water v. City of Flint*, No. 15-cv-12084 (E.D. Mich. June 23, 2015)

11. Marc Edwards, *Flint River water 19X more corrosive than Detroit water for Lead Solder; Now What?*, Flint Water Study (Sept. 11, 2015)

12. Marc Edwards, *Flint River water is very corrosive to lead, and causing lead contamination in homes*, Flint Water Study (Sept. 2, 2015)

13. Brianna Owczarzak, *GM says no to Flint water*, WNEM (Oct. 14, 2014)

14. U.S. EPA, Integrated Science Assessment for Lead tbl.ES-1 (June 2013)

15. U.S. EPA, Basic Information About Lead in Drinking Water (last updated June 26, 2015)

16. Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, and Mike Prysby, MDEQ (Feb. 26, 2015)

17. City of Flint, City of Flint Issues Lead Advisory (Sept. 25, 2015)

18. H.R. Rep. No. 93-1185, 1974 U.S.C.C.A.N. 6454, 6487 (1974); *In re Yakima Valley Dairies*, Admin. Order on Consent (U.S. EPA Region 10, Mar. 5, 2013)

19. Complaint, *Coalition for Clean Water v. City of Flint*, No. 104900-cz (Mich. Cir. Ct. June 5, 2015)

20. Ron Fonger, *Groups collect 26,000 signatures to end use of Flint River for Water*, Michigan Live (Aug. 31, 2015)

21. Ron Fonger, *Flint mayor accepts petitions but not call to end use of Flint River*, Michigan Live (Aug. 31, 2015)

22. William E. Ketchum III, *People take to streets to protest Flint water quality*, Michigan Live (Feb. 14, 2015)

23. AP, *Flint city councilman: 'We got bad water,'* Detroit Free Press (Jan. 14, 2015)

24. Letter from Jim Ananich, Mich. Sen. Minority Leader and Sheldon Neeley, Phil Phelps, Mich. State Representatives, to Dan Wyant, MDEQ (Sept. 10, 2015)

25. Letter from U.S. Representative Dan Kildee, U.S. Representative, to Administrator Gina McCarthy, U.S. EPA, & Director Dan Wyant, MDEQ (Sept. 9, 2015)

26. *Flint Town Hall Meeting Presentation and Distribution of lead results across Flint by ward and zip codes*, Flint Water Study (Sept. 16, 2015)

27. Siddhartha Roy, Flint Water Study Updates for the Citizens of Flint (Sept. 15, 2015)

28. Ron Fonger, *Virginia Tech professor says Flint's tests for lead in water can't be trusted*, Michigan Live (Sept. 15, 2015)

29. *Lead testing results for water sampled by residents,* Flint Water Study (last visited Sept. 28, 2015)

30. Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, et al. (Mar. 18, 2015)

31. Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, et al. (June 4, 2015)

32. Consumer Notice of Lead & Copper Results in Drinking Water (Feb. 18, 2015)

33. Mich. Dep't of Envtl. Quality, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply (Aug. 20, 2015)

34. Drinking Water Lead & Copper Sampling Instructions

35. Memorandum from Miguel A. Del Toral, Regulations Mgmr., Ground Water and Drinking Water Branch, U.S. EPA Region 5, to Thomas Poy, Chief, Ground Water and Drinking Water Branch, U.S. EPA Region 5, re High Levels in Flint, Michigan—Interim Report 2 (June 24, 2015)

36. U.S. EPA, Lead and Copper Rules Monitoring and Reporting Guidance for Public Water Systems 28 (Mar. 2010)

37. Letter from Cynthia C. Dougherty, U.S. EPA, to Ralph Scott, Alliance for Healthy Homes (Sept. 12, 2008)

38. MDEQ, Frequently Asked Questions: Water Lead Levels in the City of Flint (Sept. 2015)

39. Centers for Disease Control and Prevention, Preventing Lead Poisoning in Your Children: Chapter 2 (Oct. 1991)

40. Centers for Disease Control and Prevention, *What Do Parents Need to Know to Protect Their Children?* (last updated June 19, 2014)

41. Centers for Disease Control and Prevention, National Biomonitoring Program, Factsheet: Lead (last updated Jul. 12, 2013)

42. U.S. EPA, Lead and Copper Rule: A Quick Reference Guide for Schools and Child Care Facilities that are Regulated Under the Safe Drinking Water Act (Oct. 2005)

43. Lead in Drinking Water, Wisc. Dep't of Nat. Res. (2008)

44. Michael Shannon & John W. Graef, *Lead Intoxication: From Lead-contaminated Water Used to Reconstitute Infant Formula*, 28 Clinical Pediatrics (8) (1989)

45. Ronnie Levin, et al., *Lead Exposures in U.S. Children, 2008: Implications for Prevention*, 116 Environ. Health Perspect. (1) (2008)

46. CDC, *Blood Lead Levels in Residents of Homes with Elevated Lead in Tap Water—District of Columbia, 2004*, 53 MMWR Weekly 268 (Apr. 2, 2004)

47. Marc Edwards, *Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water,* 48 Envtl. Sci. & Tech. 739 (2013)

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49. Pediatric Lead Exposure in Flint, MI: Concerns from the Medical Community (PowerPoint Presentation)

50. Kristi Tanner & Nancy Kaffer, *State data confirms higher blood-lead levels in Flint kids*, Detroit Free Press (Sept. 29, 2015)

51. Centers for Disease Control and Prevention, *Public Health in Action: Lead Poisoning Prevention in Michigan* (last updated Feb. 4, 2013)

52. American FactFinder, 2009-2013 American Community Survey 5-year Estimates, Flint, Michigan and State of Michigan

53. American Cancer Society, *Lead, Lead in the Environment* (last updated May 27, 2014)

54. 2012 Annual Data Report on Blood Lead Levels of Children in Michigan 26 (Apr. 2013)

55. CPSC, *CPSC Announces Final Ban on Lead-Containing Paint* (Sept. 2, 1977)

56. Dominic Adams, *State says Flint hasn't applied for permit to use river as drinking water source*, Michigan Live (Mar. 28, 2014)

57. Email from Stephen Busch, MDEQ, to Jennifer Crooks and Miguel Del Toral, U.S. EPA (Feb. 27, 2015)

58. Email from Pat Cook, MDEQ, to Miguel Del Toral, U.S. EPA (Apr. 24, 2015)

59. Email from Michael Glasgow (June 1, 2015)

60. City of Flint Water Plant, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply (Jul. 28, 2015)

61. Email from Adam Rosenthal, MDEQ, to Michael Glasgow, Brent Wright, City of Flint (June 25, 2015)

62. Letter from MDEQ to MI State Senators (Sept. 17, 2015)

63. *Did this Michigan Town Poison its Children?*, U.S. News & World Report (Sept. 24, 2015)

64. Ron Fonger, *Feds sending in experts to help Flint keep lead out of water*, Michigan Live (Sept. 10, 2015)

65. Ron Fonger, *Flint will have lead-reduction plan for water system by 2016, officials say*, Michigan Live (Sept. 3, 2015)

66. Amanda Emery, *Flint public school students told to bring own water to school*, Michigan Live (Sept. 25, 2015)

67. U.S. Census Bureau, American FactFinder, 2010 Demographic Profile Data, Flint Michigan

68. 2009-2013 American Community Survey 5-Year Estimates, Children's Characteristics, Flint, Michigan

69. Dominic Adams, *Flint monthly water and sewer bills highest in Genesee County by $35,* Michigan Live (June 1, 2014)

70. Ron Fonger, *Judge orders Flint to cut water rates 35 percent in sweeping injunction,* Michigan Live (Aug. 7, 2015)

71. U.S. EPA, Planning for an Emergency Drinking Water Supply (June 2011)

72. U.S. EPA, Memorandum re: Update on Providing Alternative Water Supply as Part of Superfund Response Actions (Sept. 24, 2010)

The residents of Flint, Michigan have been and continue to be exposed to dangerous levels of lead in their drinking water. Monitoring results confirm that, in many instances, these levels are well above the threshold set by the U.S. Environmental Protection Agency (EPA) that triggers mandatory corrective action by public water systems. The City of Flint and the Michigan Department of Environmental Quality (MDEQ) have failed to address this public health crisis, despite their awareness of these monitoring results and data showing increasing blood lead levels in children residing in Flint.

The Coalition for Clean Water, Concerned Pastors for Social Action, Water You Fighting For, Democracy Defense League Water Task Force, Flint Water Study Team, Michigan Nurses Association, NAACP – Michigan State Conference, Michigan Chapter of the National Conference of Black Lawyers, American Civil Liberties Union of Michigan, and Natural Resources Defense Council (collectively, Petitioners) petition EPA to use its emergency powers under the Safe Drinking Water Act (SDWA or the Act), 42 U.S.C. § 300i, to take action to abate the imminent and substantial endangerment to human health caused by lead contamination in Flint's drinking water. As Petitioners demonstrate below, this contamination meets the SDWA requirements for immediate action by EPA and requires a comprehensive federal response.

I. Background

Water-quality problems have plagued Flint's water system since at least April 2014, when the City began using the Flint River as its water source after deciding not to continue purchasing water from Lake Huron through the Detroit Water and Sewerage Department, as it had done for nearly fifty years.[1] In the eighteen months since the switch to Flint River water, the City's drinking water has been at times discolored, foul smelling, and "laden with sediments."[2] Residents report that they have experienced hair loss, skin rashes, and vomiting after drinking the water.[3] In the summer of 2014, the City was forced to issue several boil-water notices after tap water tested positive for total coliform bacteria, which

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[1] *See* Dominic Adams, *Closing the valve on history: Flint cuts water flow from Detroit after nearly 50 years*, Michigan Live, Apr. 25, 2014, http://www.mlive.com/news/flint/index.ssf/2014/04/closing_the_valve_on_history_f.html (attached as Ex. 1); Letter from Darnell Earley, Emergency Manager, to Sue McCormick, Detroit Water & Sewer Dep't (Mar. 7, 2014) (explaining that the City "has actively pursued using the Flint River as a temporary water source" instead of accepting Detroit's offer to "provide[] Flint with the option of continuing to purchase water from DWSD") (attached as Ex. 2).

[2] *See* Curt Guyette, *In Flint, Michigan, Overpriced Water is Causing People's Skin to Erupt in Rashes and Hair to Fall Out*, The Nation, July 16, 2015, http://www.thenation.com/article/in-flint-michigan-overpriced-water-is-causing-peoples-skin-to-erupt-and-hair-to-fall-out/ (attached as Ex. 3); Wenonah Hauter, *Flint's Brown Water Blues*, Huffington Post, July 10, 2015, http://www.huffingtonpost.com/wenonah-hauter/flints-brown-water-blues_b_7765132.html (attached as Ex. 4).

[3] Laura Gottesdiener, *Flint, Mich., Residents find state water control hard to swallow*, Al Jazeera America, Apr. 3, 2015, http://america.aljazeera.com/articles/2015/4/3/flint-residents-find-state-water-control-hard-to-swallow.html (attached as Ex. 5).

suggested a possible "pathway for pathogens and fecal contamination" to enter the water system.[4]

The City's subsequent treatment of the water to kill disease-carrying pathogens resulted in elevated levels of total trihalomethanes (TTHM), a byproduct of disinfection.[5] Drinking water with TTHM levels that exceed the federal limit can cause "liver, kidney, or central nervous system problems and increased risk of cancer."[6] In response to the City's water problems, local hospitals, schools, and museums began using bottled water instead of tap water.[7] Some grocery stores reduced the price of bottled water and "sponsored community giveaways of bottled water to low income residents."[8]

Flint River water is also highly corrosive, causing dangerous amounts of lead to leach out of pipes and into the City's water system.[9] Recent sampling has shown that lead is present in Flint's water system at levels well above 15 parts per billion (ppb), the "action level" for lead under the SDWA.[10] These high lead levels put residents at risk of increased lead exposure, which can cause a broad array of serious, irreversible health effects, including cognitive impairment, decreased red blood cell survival, kidney damage, coronary heart disease, and impaired reproductive function.[11]

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[4] Ron Fonger, *Flint issues boil water advisory for section of the city after positive test result for total coliform bacteria*, Michigan Live, Sept. 5, 2014, http://www.mlive.com/news/flint/index.ssf/2014/09/flint_issues_boil_water_adviso.html (attached as Ex. 6).

[5] Robin Erb, *Who wants to drink Flint's water?*, Detroit Free Press, Jan. 23, 2015, http://www.freep.com/story/news/local/michigan/2015/01/22/water-woes-latest-hit-flint/22193291/ (attached as Ex. 7); Mich. Dep't of Envtl. Quality, Violation Notice—Maximum Contaminant Level for Total Trihalomethanes (Dec. 16, 2014) (attached as Ex. 8).

[6] U.S. EPA, Basic Information about Disinfection Byproducts in Drinking Water, http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm (last updated Dec. 13, 2013) (attached as Ex. 9); *see* 40 C.F.R. § 141.64(b).

[7] Order Den. Mot. for Prelim. Inj. 1, *Coalition for Clean Water v. City of Flint*, No. 15-cv-12084 (E.D. Mich. June 23, 2015), ECF No. 6 (attached as Ex. 10).

[8] *Id.*

[9] Marc Edwards, *Flint River water 19X more corrosive than Detroit water for Lead Solder; Now What?*, Flint Water Study (Sept. 11, 2015), http://flintwaterstudy.org/2015/09/test-update-flint-river-water-19x-more-corrosive-than-detroit-water-for-lead-solder-now-what/ (attached as Ex. 11); Marc Edwards, *Flint River water is very corrosive to lead, and causing lead contamination in homes*, Flint Water Study (Sept. 2, 2015), http://flintwaterstudy.org/2015/09/flint-rivers-water-is-very-corrosive-to-lead-and-causing-lead-contamination-in-homes/ (attached as Ex. 12). The river water is so corrosive that in October 2014, a local GM engine plant decided to switch back to Lake Huron water to avoid damage to equipment at the plant from corrosion. Brianna Owczarzak, *GM says no to Flint water*, WNEM, Oct. 14, 2014, http://www.wnem.com/story/26785625/gm-says-no-to-flint-water (attached as Ex. 13).

[10] 40 C.F.R. § 141.80(c)(1).

[11] *See, e.g.*, U.S. EPA, Integrated Science Assessment for Lead tbl.ES-1 (June 2013) (attached as Ex. 14) (summarizing health effects of lead exposure); U.S. EPA, Basic

The City of Flint and the Michigan Department of Environmental Quality (MDEQ) have been aware of independent monitoring results showing exceedingly high lead levels in the City's drinking water for months.[12] Despite increasing public concern about the safety of the City's drinking water, neither the City nor MDEQ has taken the actions necessary to meaningfully address the problem. The City has not implemented *any* measures to treat the highly corrosive Flint River water to reduce the amount of lead leaching from service pipes.[13] And MDEQ refuses to use its enforcement authority under the SDWA or state law to require Flint to employ corrosion control measures or provide alternative safe water supplies.[14]

When state and local authorities fail to adequately address a public health crisis, the SDWA empowers EPA to act. Section 1431 of the Act vests EPA with broad emergency authority to address endangerments to public health from contaminated drinking water. The EPA Administrator may use these emergency powers "upon receipt of information that a contaminant which is present in or is likely to enter a public water system . . . may present an imminent and substantial endangerment to the health of persons, and that appropriate State and local authorities have not acted to protect the health of such persons."[15] Once the Administrator receives this information, she may "take such actions as [s]he may deem necessary in order to protect [public] health."[16] These actions "may include (but shall not be limited to) . . . issuing such orders as may be necessary to protect the health of persons who are or may be users of such system (including travelers), including

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Information About Lead in Drinking Water, http://water.epa.gov/drink/contaminants/basicinformation/lead.cfm (last updated June 26, 2015) (explaining that "[i]nfants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development," and that "[a]dults who drink this water over many years could develop kidney problems or high blood pressure") (attached as Ex. 15); *see also* National Ambient Air Quality Standards for Lead, 80 Fed. Reg. 278, 290 (Jan. 5, 2015).

[12] *See, e.g.*, Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, and Mike Prysby, MDEQ (Feb. 26, 2015) (describing "[b]ig worries" for high lead test results at a Flint resident's home) (attached as Ex. 16).

[13] The City's plan to implement corrosion control measures within thirty to sixty days is inadequate to address the ongoing endangerment. *See* City of Flint, City of Flint Issues Lead Advisory (Sept. 25, 2015), https://www.cityofflint.com/2015/09/25/city-of-flint-issues-lead-advisory/ (attached as Ex. 17).

[14] *See* Mich. Comp. Laws Ann. §§ 325.1015(1) ("When considered necessary for protection of the public health, the department shall notify a supplier of water of the need to make changes in operations, to provide treatment, [or] to make structural changes in existing systems . . . as necessary to produce and distribute an adequate quantity of water meeting the state drinking water standards."), (3) ("If a public water supply poses an imminent hazard to the public health, the department may issue an emergency order immediately, . . . requiring such action as the department determines is necessary to protect the public health.").

[15] 42 U.S.C. § 300i(a).

[16] *Id.*

orders requiring the provision of alternative water supplies by persons who caused or contributed to the endangerment."[17] EPA has, in the past, used its emergency powers to issue orders to provide alternative safe water sources to community members, require public notice of the drinking water hazard, require contributors to the hazard to treat or otherwise mitigate the hazardous conditions, and require additional monitoring and data-collection activities.[18]

As Petitioners demonstrate below, the lead contamination in Flint's drinking water meets the prerequisites that authorize EPA to take emergency action under the SDWA.

II. Interests of Petitioners

Petitioners are community groups and advocacy organizations seeking safe and clean water for all residents in Flint. For instance, the Coalition for Clean Water (Coalition), which includes Concerned Pastors for Social Action, Water You Fighting For, and Democracy Defense League Water Task Force, among other community members, has urged city and state officials for months to address Flint's water-quality problems. The Coalition filed a lawsuit in June 2015 in the Circuit Court for the County of Genesee seeking declaratory, injunctive, and other relief relating to Flint's water-quality problems.[19] In August 2015, Food and Water Watch, Water You Fighting For, and the Coalition for Clean Water collected more than 26,000 signatures on a petition to Mayor Dayne Walling asking the City to end its use of the Flint River as a drinking water source.[20] Community members have also organized marches[21] and met with City Council[22] to raise concerns about the quality of Flint's drinking water. These advocacy activities fueled awareness and concern

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[17] *Id.*

[18] *See* H.R. Rep. No. 93-1185, 1974 U.S.C.C.A.N. 6454, 6487 (1974); *In re Yakima Valley Dairies*, Admin. Order on Consent (U.S. EPA Region 10, Mar. 5, 2013), http://www.epa.gov/region10/pdf/sites/yakimagw/consent_order_yakima_valley_dairies_march2013.pdf (attached as Ex. 18).

[19] Compl., *Coalition for Clean Water v. City of Flint*, No. 104900-cz (Mich. Cir. Ct. June 5, 2015) (attached as Ex. 19).

[20] Ron Fonger, *Groups collect 26,000 signatures to end use of Flint River for Water*, Michigan Live, Aug. 31, 2015, http://www.mlive.com/news/flint/index.ssf/2015/08/groups_delivering_26000_signat.html#incart_river (attached as Ex. 20); Ron Fonger, *Flint mayor accepts petitions but not call to end use of Flint River*, Michigan Live, Aug. 31, 2015, http://www.mlive.com/news/flint/index.ssf/2015/08/flint_mayor_accepts_petitions.html (attached as Ex. 21).

[21] William E. Ketchum III, *People take to streets to protest Flint water quality*, Michigan Live, Feb. 14, 2015, http://www.mlive.com/news/flint/index.ssf/2015/02/flint_residents_protest_citys.html (attached as Ex. 22).

[22] AP, *Flint city councilman: 'We got bad water,'* Detroit Free Press, Jan. 14, 2015, http://www.freep.com/story/news/local/michigan/2015/01/14/flint-water-resident-complaints/21743465/ (attached as Ex. 23).

among residents and some elected officials in Flint,[23] but have not resulted in any comprehensive action by the City or the State.

III. Lead present in and likely to continue to enter Flint's water system presents an imminent and substantial endangerment to human health

A. Lead is present in and likely to continue to enter Flint's water system

Flint's residents face ongoing endangerment from lead in their drinking water. Recent sampling data show that dangerously high levels of lead are present in and will likely continue to enter Flint's water system.[24] In August and September 2015, Dr. Marc Edwards, a water resources engineering professor at Virginia Tech, tested 252 drinking water samples collected from Flint residences. Edwards found that *ten percent* of these samples had lead levels of 25 ppb or more, substantially in excess of the federal action level of 15 ppb.[25] Several samples exceeded 100 ppb, and one sample exceeded 1000 ppb.[26] Edwards' sampling data show that lead—a contaminant under the SDWA[27]—is present in Flint's water system.

The results of Edwards' testing are even more concerning because the sampling did not target high-risk residences, as the City is required to do under the Lead and Copper Rule.[28] Because lead levels in a water system are not evenly distributed, EPA requires monitoring for lead under the SDWA to target high-risk residences, "to better ensure that high levels of lead are detected and that the system institutes treatment that provides

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[23] *See* Letter from Jim Ananich, Mich. Sen. Minority Leader and Sheldon Neeley, Phil Phelps, Mich. State Representatives, to Dan Wyant, MDEQ (Sept. 10, 2015) (attached as Ex. 24); Letter from U.S. Representative Dan Kildee, U.S. Representative, to Adm'r Gina McCarthy, U.S. EPA, and Director Dan Wyant, MDEQ (Sept. 9, 2015) (attached as Ex. 25).

[24] Flint's water system is a "public water system" for purposes of the SDWA because it provides water for human consumption to more than twenty-five individuals. 42 U.S.C. § 300f(4).

[25] *Flint Town Hall Meeting Presentation and Distribution of lead results across Flint by ward and zip codes*, Flint Water Study (Sept. 16, 2015), http://flintwaterstudy.org/2015/09/distribution-of-lead-results-across-flint-by-ward-and-zip-codes/ (attached as Ex. 26); Siddhartha Roy, Flint Water Study Updates for the Citizens of Flint (Sept. 15, 2015) (attached as Ex. 27); Ron Fonger, *Virginia Tech professor says Flint's tests for lead in water can't be trusted*, Michigan Live, Sept. 15, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/virginia_tech_researcher_says.html (attached as Ex. 28).

[26] *Lead testing results for water sampled by residents,* Flint Water Study, http://flintwaterstudy.org/information-for-flint-residents/results-for-citizen-testing-for-lead-300-kits/ (attached as Ex. 29).

[27] *See* 42 U.S.C. § 300f(6).

[28] 40 C.F.R. § 141.86(a)(3)-(5); 56 Fed. Reg. 26,460, 26,514 (June 7, 1991) (adopting approach that "require[s] water systems to collect samples from high-risk residences that are most likely to have lead problems").

uniform and adequate levels of public health protection."[29] Because targeting high-risk residences "means that the detected levels will likely be higher than if sampling were randomly distributed,"[30] Edwards' data showing a 90th percentile lead level of 25 ppb is particularly alarming given that his sampling protocol would be expected to produce *lower* results than the targeted sampling protocol mandated by the Lead and Copper Rule.

The City's monitoring data confirm that some Flint residents' water contains lead at concentrations above the federal action level. Several samples collected by the City showed lead levels as high as 397 ppb, 25 times the action level.[31] Although the City claims that its data show that the 90th percentile lead concentration is lower than the 90th percentile in Edwards' sampling pool, these differences may be attributable to the sampling methods employed by the City. For instance, the City instructed residents to pre-flush their water for "at least 5 minutes" before collecting the sample.[32] Pre-flushing has the effect of reducing the amount of lead in the sample, which is why one of the key steps residents can take to reduce their lead exposure following discovery of a lead problem is to flush their taps prior to consuming tap water.[33] Pre-flushing in sampling results in "significant underestimation of lead levels in drinking water."[34] Pre-flushing is not included in the collection procedures EPA recommends,[35] and is contrary to the Lead and Copper Rule's intent to use worst-case lead and copper sampling data.[36] Evidence also shows that in the January to June 2015 monitoring period, the City did not use a pre-developed sampling pool that targeted high-

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[29] 56 Fed. Reg. at 26,514.

[30] *Id.*

[31] *See* Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ (Mar. 18, 2015) (referring to sample with lead level at 397 ppb) (attached as Ex. 30); Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, et al. (June 4, 2015) (referring to samples showing lead levels 22 ppb and 40 ppb) (attached as Ex. 31); Consumer Notice of Lead & Copper Results in Drinking Water (Feb. 18, 2015) (lead level at 104 ppb) (attached as Ex. 32); *see also* Mich. Dep't of Envtl. Quality, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply (Aug. 20, 2015) (showing six samples with lead levels over the action level (attached as Ex. 33).

[32] Drinking Water Lead & Copper Sampling Instructions, *available at* http://www.michigan.gov/documents/deq/Lead_Copper_Sampling_Instructions_329915_7.pdf (attached as Ex. 34).

[33] Memorandum from Miguel A. Del Toral, Regulations Mgr., Ground Water and Drinking Water Branch, U.S. EPA Region 5, to Thomas Poy, Chief, Ground Water and Drinking Water Branch, U.S. EPA Region 5, re High Levels in Flint, Michigan—Interim Report 2 (June 24, 2015) (attached as Ex. 35).

[34] *Id.*

[35] U.S. EPA, Lead and Copper Rules Monitoring and Reporting Guidance for Public Water Systems 28 (Mar. 2010) (attached as Ex. 36).

[36] See Letter from Cynthia C. Dougherty, U.S. EPA, to Ralph Scott, Alliance for Healthy Homes (Sept. 12, 2008) ("[W]e believe that [pre-flushing] goes against the intent of the monitoring protocol, since it changes the normal water use of the homeowners in the sample.") (attached as Ex. 37).

risk residences and did not sample sites consistently across monitoring periods.[37] This likewise may have caused the City's sampling results to underrepresent the 90th percentile lead level in the water system.[38]

The lead contamination in Flint's water is likely to continue. As EPA has explained, "[t]he amount of lead in drinking water depends heavily on the corrosivity of the water,"[39] and testing has shown that Flint River water is highly corrosive. Moreover, the City has no treatment program in place to control the corrosive effects of the water on the City's thousands of lead service lines.[40]

B. Lead in drinking water presents an imminent and substantial endangerment to Flint residents

The endangerment to Flint residents from lead in drinking water is both "imminent" and "substantial."[41] The endangerment to community members' health is imminent because the threat "is present *now*."[42] Highly corrosive water in the Flint River has been flowing through lead service lines in Flint's water system for more than a year without any corrosion control treatment, and sampling has already shown the existence of dangerously high levels of lead in residents' tap water.

The seriousness of the potential harms from lead exposure renders the endangerment "substantial" for purposes of the SDWA.[43] The poisonous effects of lead on "virtually every system in the body," and particularly on the developing brains of young children, are well documented.[44] "Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement," effects that are irreversible.[45]

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[37] *See infra* p. 11 & nn. 70-74; 40 C.F.R. § 141.86(a), (b)(4).

[38] *See infra* p. 11-12.

[39] 56 Fed. Reg. 26,460, 26,466 (June 7, 1991).

[40] MDEQ, Frequently Asked Questions: Water Lead Levels in the City of Flint (Sept. 2015), https://www.michigan.gov/documents/deq/deq-spotlight-Flint_water_FAQs_500946_7.pdf (stating that Flint has more than 15,000 lead service lines) (attached as Ex. 38).

[41] *Id.* § 300i.

[42] *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 486 (1996) (interpreting substantial-and-imminent-endangerment provision in RCRA).

[43] *E.g.*, *Me. People's Alliance v. Mallinckrodt, Inc.*, 471 F.3d 277, 288 (1st Cir. 2006).

[44] Centers for Disease Control and Prevention, Preventing Lead Poisoning in Your Children: Chapter 2 (Oct. 1991), http://www.cdc.gov/nceh/lead/publications/books/plpyc/chapter2.htm (attached as Ex. 39); *see also* 80 Fed. Reg. 278, 290 (Jan. 5, 2015) ("Lead has been demonstrated to exert a broad array of deleterious effects on multiple organ systems."); 56 Fed. Reg. 26,460, 26,467-68 (June 7, 1991).

[45] Centers for Disease Control and Prevention, *What Do Parents Need to Know to Protect Their Children?* (last updated June 19, 2014), http://www.cdc.gov/nceh/lead/ACCLPP/blood_lead_levels.htm (attached as Ex. 40).

The scientific community has not identified *any* threshold of lead in blood below which there are no adverse health impacts.[46]

Increased lead exposure from drinking water is dangerous because "drinking water can make up 20 percent or more of a person's total exposure to lead."[47] For infants whose diet consists of baby formula made with drinking water, lead in drinking water can make up between forty and sixty percent of total lead exposure.[48] Lead levels in drinking water above the federal action level have been associated with an increase in the rate of individuals with elevated blood lead levels.[49] Exposure to lead-contaminated drinking water has also been associated with fetal death and reduced birth rates.[50] As EPA has recognized, "[i]nfants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development."[51] In short, there is no safe level of lead in drinking water.[52]

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[46] Centers for Disease Control and Prevention, National Biomonitoring Program, Factsheet: Lead (last updated Jul. 12, 2013), http://www.cdc.gov/biomonitoring/Lead_FactSheet.html ("No safe blood lead level has been identified.") (attached as Ex. 41).

[47] U.S. EPA, Lead and Copper Rule: A Quick Reference Guide for Schools and Child Care Facilities that are Regulated Under the Safe Drinking Water Act (Oct. 2005), http://www.epa.gov/safewater/schools/pdfs/lead/qrg_lcr_schools.pdf (attached as Ex. 42).

[48] Lead in Drinking Water, Wisc. Dep't of Nat. Res. 2008), http://dnr.wi.gov/topic/drinkingwater/documents/forms/lead.pdf (attached as Ex. 43). Several cases have also been reported in which infant formula constituted from lead-contaminated tap water was determined to be the sole cause of childhood lead poisoning. *See, e.g.*, Michael Shannon & John W. Graef, *Lead Intoxication: From Lead-contaminated Water Used to Reconstitute Infant Formula*, 28 Clinical Pediatrics (8) 380, 381 (1989) (attached as Ex. 44).

[49] Ronnie Levin, et al., *Lead Exposures in U.S. Children, 2008: Implications for Prevention*, 116 Environ. Health Perspect. (1) 1285-93 (2008), *available at* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569084/ (attached as Ex. 45); CDC, *Blood Lead Levels in Residents of Homes with Elevated Lead in Tap Water—District of Columbia, 2004*, 53 MMWR Weekly (No. 12) 268-70 (Apr. 2, 2004), *available at* http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5312a6.htm (attached as Ex. 46).

[50] Marc Edwards, *Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water,* 48 Envtl. Sci. & Tech. 739-40 (2013), *available at* http://pubs.acs.org/doi/pdf/10.1021/es4034952 (attached as Ex. 47).

[51] U.S. EPA, Basic Information about Lead in Drinking Water, *supra* note 11.

[52] *See* Email from Jennifer Crooks, U.S. EPA, to Mike Prysby, MDEQ (Feb. 26, 2015) ("[T]here are no safe levels of lead in drinking water.") (attached as Ex. 48); City of Flint Issues Lead Advisory, *supra* note 13 (recognizing that "no level of lead is considered safe"). Because no safe level of lead in blood has been identified, EPA promulgated a Maximum Contaminant Level Goal for lead in drinking water of *zero*, reflecting EPA's determination that a threshold of zero lead in drinking water is the level at which "no known or anticipated adverse effects" on human health will occur, allowing for a margin of safety. *See* 40 C.F.R. §§ 141.2, 141.51(b).

Petitioners have reason to be concerned about the health impacts of increased exposure to lead in drinking water. A recent study conducted by researchers at Flint's Hurley Medical Center found that the rate of Flint children with elevated blood lead levels is rising. An analysis of 1746 Flint children under five years old showed that the proportion of children with elevated blood lead levels has *doubled* in the time since the City changed its drinking water source.[53] The study found that the rate of elevated blood lead levels in children under fifteen months is 2.5 times greater after the switch to Flint River water than the rate before the switch.[54] The study found no corresponding statistically significant increase in the rate of elevated blood lead levels of children living in Genesee County outside of Flint.[55] Data released by the State confirm that the percentage of Flint children under sixteen with elevated blood levels has risen (from 2.37% to 3.21%) since the switch to Flint River water.[56]

This increased rate of children with elevated blood lead levels is even more alarming because the Flint community may be more at risk for elevated blood lead levels and lead poisoning than communities elsewhere in the country. Michigan ranks fifth worst in the country for harmful exposures to lead.[57] Low income is a risk factor for lead poisoning, and the proportion of families living below the poverty level in Flint is more than three times the national proportion (35.5% in Flint vs. 11.3% nationally in 2013 estimates).[58] Living in housing built before 1978 (when the federal ban on high-lead paint went into effect) is also a risk factor, because dust from lead paint continues to be a major source of lead exposure in children.[59] Nearly 90% of housing in Flint was built before

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[53] Pediatric Lead Exposure in Flint, MI: Concerns from the Medical Community (PowerPoint Presentation), *available at* http://flintwaterstudy.org/2015/09/pediatric-lead-exposure-presentation-from-hurley-medical-center-doctors-concerning-flint-mi/ (attached as Ex. 49).

[54] *Id.*

[55] *Id.*

[56] Kristi Tanner & Nancy Kaffer, *State data confirms higher blood-lead levels in Flint kids*, Detroit Free Press, Sept. 29, 2015, http://www.freep.com/story/opinion/columnists/nancy-kaffer/2015/09/26/state-data-flint-lead/72820798/ (attached as Ex. 50).

[57] Centers for Disease Control and Prevention, *Public Health in Action: Lead Poisoning Prevention in Michigan* (last updated Feb. 4, 2013), http://www.cdc.gov/nceh/information/healthy_homes_lead.htm (attached as Ex. 51).

[58] 2009-2013 American Community Survey 5-year Estimates, 2013, *available at* http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml (enter "Flint, MI" in the box under "Community Facts," click on "Income" on left-side bar, then click "Selected Economic Characteristics" under "2013 American Community Survey") (table attached as Ex. 52 compares data from Flint, MI to Michigan and the United States).

[59] *See, e.g.*, Am. Cancer Soc'y, *Lead, Lead in the Environment,* http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/lead (last updated May 27, 2014) (characterizing lead paint as a "major" source of exposure) (attached as Ex. 53).

1978.[60] These factors show that the risks to Flint residents from lead exposure may be particularly acute.

The monitoring data showing high lead levels in Flint drinking water, combined with the well-known serious adverse health impacts of lead exposure, demonstrate "a substantial likelihood that contaminants capable of causing adverse health effects will be ingested by consumers if preventive action is not taken."[61] These circumstances constitute an imminent and substantial endangerment warranting emergency federal action.[62]

IV. Neither the City nor MDEQ has acted to protect Flint residents from continuing health risks of exposure to high lead levels in drinking water

Federal emergency action is necessary because neither the City nor MDEQ has adequately addressed the danger to Flint residents from lead in their drinking water. To date, the local and state response to lead concerns has been, at best, nominal and ineffective.[63]

The state-appointed emergency manager and MDEQ allowed the City to begin using the Flint River as its water source without adequately ensuring that the system would continue to "operate and maintain optimal corrosion control treatment," as required by the SDWA.[64] The Lead and Copper Rule requires states to "review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system."[65] But as of March 28, 2014, three weeks before the City planned to start using Flint River water, the City had not even submitted an application to the State for approval to make the change.[66] A month later, MDEQ had approved the change without requiring the City to implement corrosion control measures, as required by the Lead and

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[60] 2012 Annual Data Report on Blood Lead Levels of Children in Michigan 26 (Apr. 2013), https://www.michigan.gov/documents/mdch/2012AnnualDataReportOnBloodLeadLevels_419508_7.pdf (attached as Ex. 54); *see* CPSC, *CPSC Announces Final Ban on Lead-Containing Paint* (Sept. 2, 1977), http://www.cpsc.gov/en/Recalls/1977/CPSC-Announces-Final-Ban-On-Lead-Containing-Paint/ (attached as Ex. 55); Maj. Thomas F. Zimmerman, *The Regulation of Lead-Based Paint in Air Force Housing,* 44 Air Force L. Rev. 169, 175 (1998).

[61] H.R. Rep. No. 93-1185, 1974 U.S.C.A.A.N. 6454, 6488 (July 10, Aug. 15, 1974) (defining when an endangerment may be considered substantial).

[62] *See Trinity Am. Corp. v. U.S. E.P.A.*, 150 F.3d 389, 399 (4th Cir. 1998) (imminent and substantial endangerment found when "dangerous levels of [a] contaminant[] exist in [the] water supply," and that the contaminant "pose[s] a great risk to human health").

[63] *See id.* at 397 (explaining that "minor" and "ineffective" action by state and local authorities does not "strip EPA of its statutory emergency powers").

[64] 40 C.F.R. § 141.81(b).

[65] 40 C.F.R. § 141.81(b)(3)(iii).

[66] Dominic Adams, *State says Flint hasn't applied for permit to use river as drinking water source*, Michigan Live, Mar. 28, 2014, http://www.mlive.com/news/flint/index.ssf/2014/03/state_says_flint_hasnt_applied_1.html (attached as Ex. 56).

Copper Rule.[67] When EPA inquired about what the City was doing to control corrosion, MDEQ falsely stated that the City was already operating an "Optimized Corrosion Control Program."[68] The opposite was true: as the State later admitted, the City had not implemented any corrosion control treatment measures (and still has not done so).[69]

Further, evidence indicates that the City and MDEQ are either unwilling or unable to conduct tap water monitoring for lead in compliance with federal regulations. As discussed above, statements by a Flint Utilities Administrator suggest that the City did not identify a sampling pool prior to conducting monitoring, as federal law expressly requires. Instead, the Department of Public Works "just thr[ew] out bottles everywhere just to collect as many [samples] as we c[ould]."[70] The City even asked its own employees and their "family/friends who live in the city" to participate in the sampling group.[71]

The City also may not have complied with requirements for targeting high-risk homes, including the requirement that 50% of sampled sites contain lead pipes or copper pipes with lead solder.[72] The City's Utilities Administrator conceded that the City was "not really" able to determine that every residence sampled had lead pipes, even though this was what the City affirmatively reported to MDEQ in a monitoring compliance report.[73] Further, the City's monitoring compliance report shows that the City did not meet the deadline to submit its monitoring results and did not comply with the requirement to sample the same sites across monitoring periods.[74] During the January to June 2015 monitoring period, the City initially sought to obtain 100 samples.[75] *After* the City failed to collect that number, MDEQ decided that only sixty samples were required.[76]

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[67] *See* 40 C.F.R. § 141.81(a)-(b).

[68] *See* Email from Stephen Busch, MDEQ, to Jennifer Crooks and Miguel Del Toral, U.S. EPA (Feb. 27, 2015) ("The City of Flint . . . [h]as an Optimized Corrosion Control Program[.]") (attached as Ex. 57).

[69] Email from Pat Cook, MDEQ, to Miguel Del Toral, U.S. EPA (Apr. 24, 2015) ("Flint is not currently practicing corrosion control treatment at the [Water Treatment Plant].") (attached as Ex. 58).

[70] *See* 40 C.F.R. § 141.86(a)(1);*Thirst for Truth: Who's to Blame for Flint Water Crisis?* (ACLU of Michigan, Jul. 28, 2015), *available at* https://www.youtube.com/watch?t=9&v=LTO9irD2f0Y (statement of Michael Glasgow, Utilities Administrator).

[71] Email from Michael Glasgow (June 1, 2015) (attached as Ex. 59).

[72] 40 C.F.R. § 141.86(a)(8).

[73] *Thirst for Truth*, supra note 70 (statement of Michael Glasgow, Utilities Administrator, at 5:30-5:45).

[74] City of Flint Water Plant, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply (Jul. 28, 2015) (checking "no" box in response to question asking whether City used the same sampling sites as the previous monitoring period) (attached as Ex. 60); *see* 40 C.F.R. §§ 141.86(b)(4); 141.90(a)(1).

[75] *See* Email from Adam Rosenthal, MDEQ, to Michael Glasgow, Brent Wright, City of Flint (June 25, 2015) (attached as Ex. 61).

[76] *Compare id.* ("We hope you have 61 more lead/copper samples collected and sent to the lab by 6/30/15, and that they will be below the AL for lead. As of now with 39 results,

Compliance with the SDWA's monitoring requirements is critical to accurately assessing the levels of lead in Flint's water, and to ensuring implementation of the drinking water standards set forth in the Lead and Copper Rule. Although the serious apparent flaws in the City's testing procedures call into question whether the City is complying with the SDWA, both the City and MDEQ continue to maintain that Flint's water "is meeting state and federal drinking water standards."[77]

Neither the City nor MDEQ has taken measures to broadly provide an alternative, free source of safe drinking water to residents. Instead, state and local authorities have dismissed citizen concerns about lead in drinking water as "near-hysteri[cal]" and "irresponsible."[78] City officials have encouraged residents to install in-home water filters, flush their taps before using the water, and send their children to school with bottled water, all at the residents' own expense, which is alarming given that there are roughly 14,000 households in Flint with children under 18, and nearly three-quarters of the children in those households receive Supplemental Security Income (SSI), cash public assistance income, or Food Stamp/SNAP benefits.[79] These remedies are inadequate: filters are expensive, may clog quickly, are of varying effectiveness at removing lead, and require

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Flint's 90th percentile is over the AL for lead."), *with* City of Flint, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply, *supra* note 31, at 1 ("Revised report after conference call with DEQ staff . . . . [D]ue to population the number of samples required was reduced to 60.").

[77] Letter from MDEQ to MI State Senators 2 (Sept. 17, 2015) (attached as Ex. 62); City of Flint, *City of Flint Issues Lead Advisory, supra* note 13 ("[T]he City is in full compliance with the Federal Safe Drinking Water Act.").

[78] *Did this Michigan Town Poison its Children?*, U.S. News & World Report, Sept. 24, 2015, http://www.usnews.com/news/articles/2015/09/25/flint-michigan-children-show-high-levels-of-lead-in-blood (attached as Ex. 63); Ron Fonger, *Feds sending in experts to help Flint keep lead out of water*, Michigan Live, Sept. 10, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/university_researchers_dont_dr.html (attached as Ex. 64). The City's statement that it will "work with [MDEQ] on implementing water optimization measures to reduce the corrosive effects of water on older pipes" by 2016 is a hollow promise given the present and continuing exposure to lead and lead's irreversible effects on human health. Ron Fonger, *Flint will have lead-reduction plan for water system by 2016, officials say*, Michigan Live, Sept. 3, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/mayor.html (attached as Ex. 65).

[79] City of Flint, *City of Flint Issues Lead Advisory*, *supra* note 13; Amanda Emery, *Flint public school students told to bring own water to school*, Michigan Live, Sept. 25, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/flint_community_schools_asks_s.html (attached as Ex. 66); *see* factfinder.census.gov (2010 data) (enter "Flint, MI" in box under "Community Facts," then click "General Population and Housing Characteristics" under "2010 Census") (attached as Ex. 67); 2009-2013 American Community Survey 5-Year Estimates, Children's Characteristics (2013 estimate), factfinder.census.gov (enter "Flint, MI" in box under "Community Facts," then click "Poverty" on left-side bar, then click "Children Characteristics") (attached as Ex. 68).

ongoing maintenance. Pre-flushing is also imperfect, does not always eliminate lead, and may be prohibitively expensive for many families given Flint's high water rates.[80]

The City's and State's apparent lapses in regulatory compliance, and their failure to take responsibility for responding to the City's lead problems, demand federal intervention.

V. EPA should act immediately to adequately address the public health emergency created by lead in Flint drinking water

Petitioners urge EPA to take all actions necessary to abate the endangerment presented by lead in Flint's drinking water, and to inform Flint residents about the potential hazards of drinking the City's tap water. At minimum, Petitioners request that EPA:

- Immediately order the City and MDEQ to reconnect Flint's water system with water from the Detroit Water and Sewerage Department. EPA should work with the City of Flint, MDEQ, and the Detroit Water and Sewerage Department to facilitate this renewed connection as soon as possible.

- Immediately provide Flint residents with an alternative, free source of safe drinking water that meets EPA standards. This may include providing customers with free bottled water or providing (and routinely maintaining) free in-home and replacement filters that are certified to remove lead by NSF International.[81]

- Immediately order the City to advise all Flint water customers to avoid consuming unfiltered water from the City's water system. The notice should warn customers not to use unfiltered Flint water to make baby formula or for children. The notice should inform customers that if they have no alternative water source, they should flush Flint water for *a minimum* of five minutes before

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[80] Dominic Adams, *Flint monthly water and sewer bills highest in Genesee County by $35,* Michigan Live, June 1, 2014, http://www.mlive.com/news/flint/index.ssf/2014/06/post_386.html (citing Flint bills at $140/month) (attached as Ex. 69). A state-court judge recently ruled that the Emergency Manager's decision to significantly raise water rates was unlawful. Ron Fonger, *Judge orders Flint to cut water rates 30% in sweeping injunction*, Michigan Live, Aug. 7, 2015, http://www.mlive.com/news/flint/index.ssf/2015/08/flint_ordered_to_cut_water_rat.html (attached as Ex. 70).

[81] *See* U.S. EPA, Planning for an Emergency Drinking Water Supply (June 2011) (provision of bottled water is a "common federal response" in emergencies) (attached as Ex. 71); *cf.* 40 C.F.R. § 141.101 (allowing public water systems to use bottled water on a temporary basis "to avoid unreasonable risk to health"); U.S. EPA, Memorandum re: Update on Providing Alternative Water Supply as Part of Superfund Response Actions (Sept. 24, 2010), http://www.epa.gov/superfund/health/conmedia/gwdocs/pdfs/610732.pdf (allowing delivery of bottled water on a temporary basis in certain circumstances in CERCLA removal or remediation actions) (attached as Ex. 72).

use. EPA should prohibit the City from charging water customers for this flushing time.

- Use its authority under 40 C.F.R. §§ 142.19 and 141.82(i) to review MDEQ's determinations concerning corrosion control requirements for the Flint water system, and issue a federal order establishing the optimal corrosion control treatment requirements for the Flint water system and requiring Flint to immediately comply with these requirements.

- Order the City to conduct continued monitoring for lead and copper in six-month periods in accordance with the procedures set forth in 40 C.F.R. § 141.86. EPA should directly oversee the City's monitoring by ordering the City to submit a Quality Assurance Project Plan (QAPP) to ensure that all information, sample collection, analytical data and resulting decisions are technically sound, scientifically valid, and properly administered. EPA must approve the City's QAPP before the City conducts any additional monitoring. EPA should prohibit the City from conducting reduced monitoring under 40 C.F.R. § 141.86(d)(4) for at least five years.

- Order the City to comply with the public education and supplemental monitoring requirements in 40 C.F.R. § 141.85, including but not limited to immediately notifying consumers of the results of tests completed at their homes or places of business, and providing the public education, monitoring, and notification established in those rules.

- Order any other additional relief that EPA determines is "necessary to protect the health" of Flint residents from lead contamination in drinking water.

VI. Conclusion

For the foregoing reasons, Petitioners respectfully request that EPA take the actions necessary to abate the imminent and substantial endangerment to Flint residents' health from lead contamination in their drinking water.

Dated: October 1, 2015

Respectfully Submitted,

/s/ Pastor Allen Overton
Pastor Allen Overton
COALITION FOR CLEAN WATER

/s/ Pastor Alfred Harris
Pastor Alfred Harris
CONCERNED PASTORS FOR SOCIAL ACTION
2200 Forrest Hill
Flint, Michigan 48504
(810) 394-6787

/s/ Melissa Mays
Melissa Mays
LeeAnne Walters
WATER YOU FIGHTING FOR

/s/ Claire McClinton
Claire McClinton
DEMOCRACY DEFENSE LEAGUE WATER TASK FORCE

/s/ Marc Edwards
Marc Edwards, CEE
Siddhartha Roy
FLINT WATER STUDY TEAM

/s/ Dawn Kettinger
Dawn Kettinger
MICHIGAN NURSES ASSOCIATION

/s/ Yvonne M. White
Yvonne M. White
NAACP – Michigan State Conference

/s/ Jeffrey L. Edison
Jeffrey L. Edison
MICHIGAN CHAPTER OF THE NATIONAL CONFERENCE OF BLACK LAWYERS

/s/ Brooke Tucker
Brooke Tucker
Michael Steinberg
AMERICAN CIVIL LIBERTIES UNION OF MICHIGAN
2966 Woodward Ave.
Detroit, MI 48201
(313) 578-6800

/s/ Dimple Chaudhary
Dimple Chaudhary
Anjali Waikar
Sarah C. Tallman
Evan Feinauer
NATURAL RESOURCES DEFENSE COUNCIL
20 N. Wacker Drive, Suite 1600
Chicago, IL 60606
(312) 663-9900

From: Lauren Brown <[redacted]>
Sent: Tuesday, December 29, 2015 3:49 PM
To: Brown, Eric (GOV)
Subject: Re: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Thanks!

On Tue, Dec 29, 2015 at 2:51 PM, Brown, Eric (GOV) <BrownE15@michigan.gov> wrote:

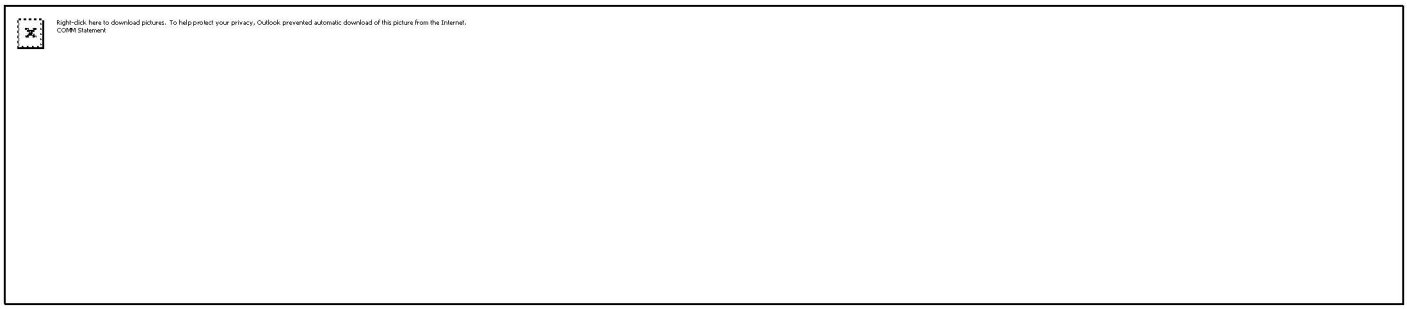
Things you may find interesting:

1. Press release on today's action

2. Michigan Auditor General report on situation, released late last week: http://www.audgen.michigan.gov/finalpdfs/15_16/i761032015.pdf

---

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Brown, Eric (GOV) BrownE15@michigan.gov
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial

findings from Flint Water Task Force

Changes to take place at DEQ, meeting planned with Mayor Karen Weaver

In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:

"When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

"The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force's final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

"We'll continue to work with the community members to make sure we hear and respond to their concerns.

"In addition, MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to address problems cited by the task force.

"But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term.

"I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.

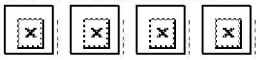
"I know many Flint citizens are angry and want more than an apology. That's why I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss

other ways the state can offer assistance.

“These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we’re committed to doing everything we can to protect the well-being of our citizens.”

# # #

STAY CONNECTED



This email was sent to browne15@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

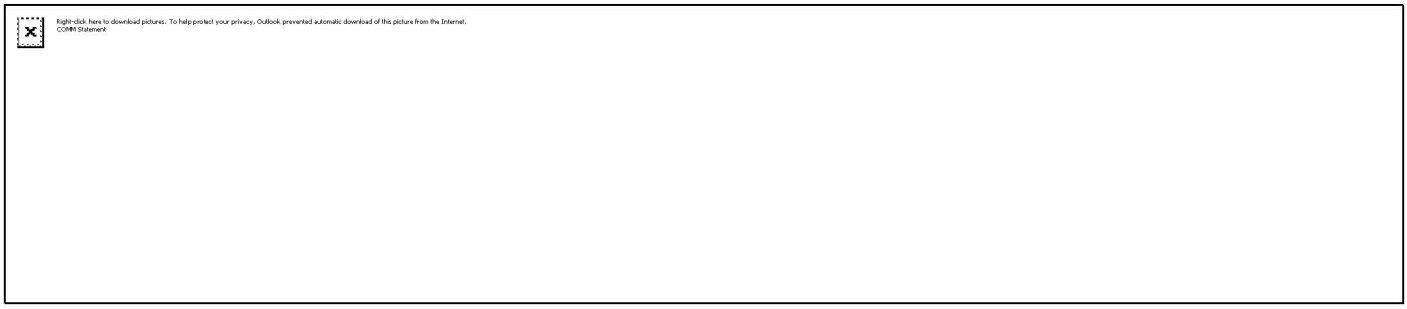
From: Taylor, Nicole (GOV)
Sent: Tuesday, December 29, 2015 3:50 PM
To: Brown, Eric (GOV)
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Done!

From: Brown, Eric (GOV)
Sent: Tuesday, December 29, 2015 3:44 PM
To: Taylor, Nicole (GOV) <TaylorN7@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Could you send this around to delegation chiefs as an FYI? Thanks!

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

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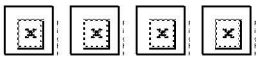
###

STAY CONNECTED:



This email was sent to browne15@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Thelen, Mary Beth (DEQ)
Sent: Sunday, April 19, 2015 9:51 AM
To: Brown, Eric (GOV)
Cc: Datema, Maggie (DEQ); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); DEQ-Legislative-Contact
Subject: Congressman Kildee - RE: Call on April 23, 10:10

Hi Eric,

This is to inform you that Congressman Kildee has scheduled a conference call with Director Dan Wyant and Maggie Datema for Thursday, April 23, 10:**10**, using their conference call in number. This is regarding City of Flint water issues as well as the Michigan's Wetland Program.

FYI.

Thank you.

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or [redacted]
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Brown, Eric (GOV)
Sent: Thursday, August 06, 2015 11:43 AM
To: Johnson, Bentley (Peters)
Subject: Re: Flint water issue

What's the water issue?

Sent from my mobile device

On Aug 6, 2015, at 11:34 AM, Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov> wrote:

> Hey Eric,
> I do want to have a longer chat in August about pipelines and Clean Power Plan, but first a more immediate request. Some constituents in Flint have approached us about looking into a water quality issue. I would like to talk to someone from MDEQ just to find out more. I was given Steve Busch's name as a contact. Are you able to set up a conversation? Or I'm happy just to email or call him directly. Thanks.
> -Bentley
>
> **Bentley Johnson**
> Legislative Assistant
> Senator Gary C. Peters
> 724 Hart Senate Office Building
> Office: 202-224-6221

From: Brown, Eric (GOV)
Sent: Thursday, August 06, 2015 12:19 PM
To: Johnson, Bentley (Peters)
Subject: Re: Flint water issue

Great, that's helpful information. I'll help get something set up for you.

Let me know when you would like to have the conversation and I'll make sure the right person is available

Sent from my mobile device

> On Aug 6, 2015, at 11:45 AM, Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov> wrote:
>
> Complaints of serious health issues ever since Flint water supply changed from Detroit water system to Flint river source in 2014. There were non-compliance issues in 2014 but EPA's letter back to the constituents said that as of May 2015, samples from all 8 testing sites are below the standard (in compliance). EPA said in the letter that MDEQ had primary oversight in this instance.
>
> -----Original Message-----
> From: Brown, Eric (GOV) [mailto:BrownE15@michigan.gov]
> Sent: Thursday, August 06, 2015 11:43 AM
> To: Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
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> -Bentley
>
> Bentley Johnson
> Legislative Assistant
> Senator Gary C. Peters
> 724 Hart Senate Office Building
> Office: 202-224-6221
>
>

From: Brown, Eric (GOV)
Sent: Thursday, August 06, 2015 12:28 PM
To: Pallone, Maggie (DEQ)
Subject: Fwd: Flint water issue

Who should talk to peters staff on this? See below, is Steve Busch the right contact?

Sent from my mobile device

Begin forwarded message:

> **From:** "Johnson, Bentley (Peters)" <Bentley_Johnson@peters.senate.gov>
> **Date:** August 6, 2015 at 11:45:54 AM EDT
> **To:** "Brown, Eric (GOV)" <BrownE15@michigan.gov>
> **Subject: RE: Flint water issue**
>
> Complaints of serious health issues ever since Flint water supply changed from Detroit water system to Flint river source in 2014. There were non-compliance issues in 2014 but EPA's letter back to the constituents said that as of May 2015, samples from all 8 testing sites are below the standard (in compliance). EPA said in the letter that MDEQ had primary oversight in this instance.
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> -Bentley
>
> Bentley Johnson
> Legislative Assistant
> Senator Gary C. Peters
> 724 Hart Senate Office Building

Office: 202-224-6221

From: Brown, Eric (GOV)
Sent: Thursday, August 06, 2015 12:48 PM
To: 'Pallone, Maggie (DEQ)'
Subject: RE: Flint water issue

You're suggesting I have both on the call?

From: Pallone, Maggie (DEQ)
Sent: Thursday, August 06, 2015 12:48 PM
To: Brown, Eric (GOV)
Subject: Re: Flint water issue

Yes and Brad Wurfel has also been doing a lot of meetings on this.

On Aug 6, 2015, at 12:28 PM, Brown, Eric (GOV) <BrownE15@michigan.gov> wrote:

> Who should talk to peters staff on this? See below, is Steve Busch the right contact?
>
> Sent from my mobile device
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>
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> > **Date:** August 6, 2015 at 11:45:54 AM EDT
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> > **Subject: RE: Flint water issue**
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> > From: Brown, Eric (GOV) [mailto:BrownE15@michigan.gov]
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Bentley Johnson
Legislative Assistant
Senator Gary C. Peters
724 Hart Senate Office Building
Office: 202-224-6221

From: Brown, Eric (GOV)
Sent: Wednesday, August 19, 2015 7:04 PM
To: Johnson, Bentley (Peters)
Subject: Re: Chat soon?

Hey, I'm on vacation this week but back next week. Shall we plan on Thursday next week? Name the time.

Sent from my mobile device

On Aug 19, 2015, at 11:17 AM, Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov> wrote:

> Hey Eric, hope you're enjoying August. Are you around to meet or get a team on the phone? I have a few things on my list to run down, including Flint water, Clean Power Plan reaction, and pipelines. I'm here today and tomorrow, then out for three business days, and back on Wednesday the 26th. Thanks!
>
> -Bentley
>
> **Bentley Johnson**
> Legislative Assistant
> Senator Gary C. Peters
> 724 Hart Senate Office Building
> Office: 202-224-6221

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 11:02 AM
To: 'Johnson, Bentley (Peters)'
Subject: RE: Chat soon?

3 would be better for me, but I can make 4 work if necessary.

-----Original Message-----
From: Johnson, Bentley (Peters) [mailto:Bentley_Johnson@peters.senate.gov]
Sent: Thursday, August 27, 2015 10:57 AM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Chat soon?

That would be great, are you free at 4pm?

-----Original Message-----
From: Brown, Eric (GOV) [mailto:BrownE15@michigan.gov]
Sent: Thursday, August 27, 2015 10:20 AM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>; Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
Subject: RE: Chat soon?

You still want to catch up today? My afternoon is flexible. Let me know

-----Original Message-----
From: Brown, Eric (GOV)
Sent: Wednesday, August 26, 2015 12:21 PM
To: 'Johnson, Bentley (Peters)' <Bentley_Johnson@peters.senate.gov>
Subject: RE: Chat soon?

Welcome back. I'm around all day. What's best for you?

-----Original Message-----
From: Johnson, Bentley (Peters) [mailto:Bentley_Johnson@peters.senate.gov]
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-Bentley

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Bentley Johnson
Legislative Assistant
Senator Gary C. Peters
724 Hart Senate Office Building
Office: 202-224-6221

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 11:03 AM
To: 'Johnson, Bentley (Peters)'
Subject: RE: Chat soon?

Let's do 3:30. Thanks for the accommodation

-----Original Message-----
From: Johnson, Bentley (Peters) [mailto:Bentley_Johnson@peters.senate.gov]
Sent: Thursday, August 27, 2015 11:03 AM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Chat soon?

I have a call at 3. I could do 2:30 or 3:30 though.

-----Original Message-----
From: Brown, Eric (GOV) [mailto:BrownE15@michigan.gov]
Sent: Thursday, August 27, 2015 11:02 AM
To: Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
Subject: RE: Chat soon?

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-Bentley

Bentley Johnson
Legislative Assistant
Senator Gary C. Peters
724 Hart Senate Office Building
Office: 202-224-6221

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 1:44 PM
To: Wurfel, Brad (DEQ)
Subject: flint water

Brad,
Do you have anything you can ship over regarding MDEQ's work on the ongoing water issues in Flint? I just got a request from Peters staff and I will be talking to them at 3:30. Thanks,
--Eric

Eric K Brown
Senior Federal Policy Representative
State of Michigan – Governor Rick Snyder
Washington D.C. Office
202.624.5840 (office)
[redacted]

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 2:55 PM
To: 'Wurfel, Brad (DEQ)'
Subject: RE: LeeAnn Walters Draft

So this resident's lead levels are much higher than the 90th percentile mentioned in the previous email. What is the discrepancy?

From: Wurfel, Brad (DEQ)
Sent: Thursday, August 27, 2015 2:00 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: FW: LeeAnn Walters Draft

Letter to a very vocal resident that went out this week. This may be what Peters' office is wanting to discuss with you. This letter has some really useful info on lead and copper testing.
b

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 1:10 PM
To: Wurfel, Brad (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

When you say they should see it as well. Do you mean see the draft or be cc'd on the e-mail?

If the former, do you wish to share it with them?

From: Wurfel, Brad (DEQ)
Sent: Monday, August 24, 2015 11:22 AM
To: Shekter Smith, Liane (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

Comprehensive. Thanks for sharing this, Liane. Lots of important information here.
I'd suggest that Harvey Hollins and Dennis Muchmore need to see it as well.

b

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 10:37 AM
To: Wurfel, Brad (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

Brad – below is our draft response to Ms. Walters in followup to our meeting at the Governor's Office. Thought you might like to review the draft before we send it out. Also, is there anyone else that should see this before it is sent?

Dear Ms. Walters,

I wanted to update you regarding our Department's findings related to questions raised during our meeting at the Governor's office on August 4. I apologize for the delay in getting back to you.

Lead and Copper Monitoring

Regarding Flint lead and copper compliance monitoring for the January – June 2015 period, the City has confirmed that all lead and copper samples collected throughout the City, whether routine sites or customer requests, were sent to the State of Michigan lab for analysis. Individual sample results are provided to the property owner within 30 days of receiving the lab results in accordance with the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 410(5). Results from the State of Michigan lab are provided directly to our Office.

Staff have confirmed that the lead 90th percentile compliance calculation of 11 parts per billion is based on 69 samples that met the appropriate sampling location site criteria, and met the sample collection site and collection protocol requirements of the Safe Drinking Water Act for this monitoring period. A minimum of 60 samples were required for this monitoring period. As indicated during the meeting, the City's sampling for lead complies with the Action Level standard of 15 parts per billion, but based on the population served by the City and these results, the City will need to make a recommendation to the MDEQ on how they will fully optimize their corrosion control treatment. These next steps continue to follow the requirements of the Lead and Copper Rule.

Samples collected at your residence of 212 Browning Avenue were not included this compliance determination as you utilize a whole home filter. As stated in the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 710a, Lead and Copper in tap water; monitoring requirements) "Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants." Such treatment alters the water chemistry and water quality such that it is no longer representative of public water from the City's distribution system. Therefore, the City cannot use samples collected at your residence as part of its determination for public water system compliance with the lead or copper action level standard.

Sample Summary (samples taken at your residence)

For your information, we are providing the information that we've gathered regarding samples collected at your home. Our records indicate between February and June of this year there were six samples collected by either you or Mr. Mike Glasgow with the City of Flint, and submitted to the State Laboratory for analysis as follows:

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Lead monitoring by public water systems serves a dual purpose. The first purpose is to ensure the public water supply is adequately treating its water to address corrosion potential and help limit lead exposure. The second purpose is to inform homeowners about lead levels within their individual residence so that they can make educated choices regarding their own exposure risk.

pH Results

During the meeting concerns were also expressed regarding pH levels within customer plumbing systems. As you may know, pH has no associated contaminant level as it is simply a numeric scale used to specify the acidity or alkalinity of a solution. The City of Flint conducts daily monitoring of pH values on both its raw and finished (treated) water at the City's water treatment plant as part of its operations. The City is also required to conduct water quality parameter monitoring in the distribution system, which includes pH. Samples are analyzed in accordance with Standard Methods using properly calibrated analytical equipment. Results for pH from these samples are summarized below.

Since late April 2014 – June 2015, the following pH conditions were reported:

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In addition, the City's treated water contains alkalinity, which is a measurement of the buffering capacity of water to resist a change in pH. As you can see from the water quality parameter monitoring results above there has been very little change in pH within the City's distribution system. The pH levels described within customer site piping or premise plumbing systems are believed to be the result of onsite treatment and not representative of water quality shown to be occuring in the public water supply system.

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Finally, there was confusion during the meeting regarding the City's annual water quality report, the Consumer Confidence Report which we have since been able to clarify.

The City of Flint issued two separate Consumer Confidence Reports (CCR's) in 2015 covering the water quality data from 2014. One report was for the period of January – April 2014 when the City was obtaining water from Detroit (DWSD).

And a second report was for the period April – December 2014 when the City was using the Flint River and its own Water Treatment Plant.

The CCR for DWSD water was mailed to customers in June. The Flint River based CCR was mailed to customers in mid-July, delayed due to issues with the printing contractor. We agree that having two separate reports caused confusion. We are working with the City to ensure both reports are posted to the City's website and both are made available when requested by customers. Should the City choose to create separate CCR's during the year that the City of Flint connects to the Karegnondi Water Authority we will work with the City to provide more clarity and try to have all material included in a single mailing.

The DWSD based CCR is the one community members had at the meeting, while the DEQ brought a copy of the Flint River based CCR. As separate and distinct sampling was done under each source, this explains the discrepancy in the values and monitoring periods being reported in the respective CCR's.

We appreciate your interest in these matters and hope this has addressed many of the questions brought up during our meeting. I would like to provide this information to both Dr. Sullivan and Ms. Mayes, but I do not have their contact information. I'm hoping you can share this with them and any others that may be interested.

Sincerely,

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 3:20 PM
To: Wurfel, Brad (DEQ)
Subject: Re: LeeAnn Walters Draft

Very helpful, thanks

Sent from my mobile device

On Aug 27, 2015, at 3:14 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> Don't know what it is, but I know what it's not. The key to lead and copper in drinking water is that it's not in the source water, or even the transmission lines (most of which are cast iron). It's in the premise plumbing (people's homes). The reason statute requires operators of large systems to test for lead & copper in homes when they switch sources is because large systems inevitably means old neighborhoods, where there's likely a lead connection line to the homes or lead pipes in the premise plumbing (or lead in the solder of copper lines installed before the mid-1990s), and what we're checking for is whether the Ph of the new source water is mobilizing lead in the pipes.
>
> Ironically, the leading fix for it is adding phosphate (ironic because we're fighting to reduce phosphorus in surface water all over the state, but particularly in the Western Lake Erie Basin). The phosphate smooths the water and reduces the interaction.
>
> In accordance with statute, we sent Flint a letter early this month saying they passed muster on the two required rounds of lead and copper tests, but we still want them to 'optimize' their system (phosphates). By law, they now have 18 months to create an optimization plan, and something like two years thereafter to implement that plan. But they're going to switch sources again in June / July of next year, which starts the whole process over again. Such is the wisdom and flexibility of the federal statute …
>
> This person is the one who had EPA lead specialist come to her home and do tests, then released an unvetted draft of his report (that EPA apologized to us profusely for) to the resident, who shared it with the ACLU, who promptly used it to continue raising hell with the locals.
>
> Bottom line is that folks in Flint are upset – because they pay a ton for water and many of them don't trust the water they're getting – and they're confused, in no small part because various groups have worked hard at keeping them confused and upset. We get it. The state is trying like mad get the word out that we're working on every aspect of the health safety of local water that we can manage, and the system needs a lot of work (because the city didn't do any discernable maintenance for nearly 40 years and the transmission lines are falling apart), but it's been rough sledding with a steady parade of community groups keeping everyone hopped-up and misinformed.
>
> Tell me what I can do to help you with the Peters' meeting, or anything else.

b

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 2:55 PM
To: Wurfel, Brad (DEQ)
Subject: RE: LeeAnn Walters Draft

So this resident's lead levels are much higher than the 90th percentile mentioned in the previous email. What is the discrepancy?

From: Wurfel, Brad (DEQ)
Sent: Thursday, August 27, 2015 2:00 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: FW: LeeAnn Walters Draft

Letter to a very vocal resident that went out this week. This may be what Peters' office is wanting to discuss with you. This letter has some really useful info on lead and copper testing.
b

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 1:10 PM
To: Wurfel, Brad (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

When you say they should see it as well. Do you mean see the draft or be cc'd on the e-mail?

If the former, do you wish to share it with them?

From: Wurfel, Brad (DEQ)
Sent: Monday, August 24, 2015 11:22 AM
To: Shekter Smith, Liane (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

Comprehensive. Thanks for sharing this, Liane. Lots of important information here. I'd suggest that Harvey Hollins and Dennis Muchmore need to see it as well.

b

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To: Wurfel, Brad (DEQ)

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Sincerely,

From: Brown, Eric (GOV)
Sent: Thursday, September 03, 2015 4:47 PM
To: Johnson, Bentley (Peters) (Bentley_Johnson@peters.senate.gov)
Subject: Flint Water
Attachments: City of Flint PbCu15 8_17_15.pdf

I believe this is the letter you're looking for. Let me know if you need anything else.
--Eric

Eric K Brown
Senior Federal Policy Representative
State of Michigan – Governor Rick Snyder
Washington D.C. Office
202.624.5840 (office)
[redacted]

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

August 17, 2015

Mr. Brent Wright
City of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

Dear Mr. Wright:

SUBJECT: Flint, City of WSSN: 02310
Lead and Copper Monitoring of Drinking Water Taps

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), received your report for the monitoring period January 1, 2015, through June 30, 2015.

Action Levels	Results this monitoring period			
	90th Percentile	# of Samples Above Action Level	# of Samples Required	# of Samples Collected
Lead 15 parts per billion (ppb)	11 ppb	6	60	69
Copper 1.3 parts per million (ppm)	0.16 ppm	0	60	69

Ninety percent or more of the sites you tested are within action levels under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). These results must be reported on your 2015 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2016. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Flint is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.water.epa.gov/drink/info/lead.*

Recent changes to the Lead and Copper Rule (LCR) require the water supply to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice by three months after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit http://www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms under the Manuals, Forms and Brochures heading. Water supplies that fail to distribute the Consumer Notice of Lead Results must include the following statement in their CCR, "During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule."

While the City's LCR compliance monitoring has continued to meet action level requirements, the LCR also requires all large systems (those serving over 50,000 people) to optimize corrosion control regardless of their 90th percentile lead concentration. One way to demonstrate fully optimized corrosion control treatment is through two consecutive six month rounds of LCR compliance monitoring in which the difference between the 90th percentile level and the highest source water lead concentration is less than the Practical Quantitative Level for lead (0.005 milligrams per liter). Since the City did not meet these criteria in both the July – December 2014, and January – June 2015, sampling periods, the City must now recommend a treatment to fully optimize corrosion control treatment within six months in accordance with requirements under Act 399, Administrative Rule 604f (R 325.10604f). **This recommendation must be provided to our office as soon as possible, but no later than January 1, 2016**.

However, given the past use of phosphate treatment by the Detroit Water and Sewerage Department (DWSD) to fully optimize corrosion control treatment when the City was a wholesale customer of DWSD, the ODWMA recommends the City select this as its recommended treatment option, and begin implementation as soon as possible to address ongoing concerns by customers regarding lead levels within their premise plumbing systems. Under the second step of this Rule, the DEQ can specify optimal corrosion control treatment.

Our office will inform you when monitoring needs to be conducted as part of the optimization of the implemented corrosion control treatment. Customer requested samples for lead shall continue to be collected and analyzed. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Please contact me at 517-284-6644 or rosenthala@michigan.gov at your earliest convenience to discuss how the City will be complying with the above requirements.

Sincerely,

Adam Rosenthal, Environmental Quality Analyst
Lansing District Office
Office of Drinking Water and Municipal Assistance

cc: Mr. Michael Glasgow, City of Flint

From: Brown, Eric (GOV)
Sent: Wednesday, September 09, 2015 1:31 PM
To: Wurfel, Brad (DEQ)
Subject: FW: Flint Water

See below, from Peters office – they want to know whether the City of Flint has responded to the optimization letter.

From: Johnson, Bentley (Peters) [mailto:Bentley_Johnson@peters.senate.gov]
Sent: Wednesday, September 09, 2015 11:00 AM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Flint Water

Have you received a response from Flint after sending this letter? Thanks.

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--Eric

Eric K Brown
Senior Federal Policy Representative
State of Michigan – Governor Rick Snyder
Washington D.C. Office
202.624.5840 (office)
[redacted]

From: Brown, Eric (GOV)
Sent: Wednesday, September 09, 2015 5:11 PM
To: 'Wurfel, Brad (DEQ)'
Subject: RE: Flint Water

thanks

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 09, 2015 4:42 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Flint Water

Getting confirmation.
b

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Senior Federal Policy Representative
State of Michigan – Governor Rick Snyder
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202.624.5840 (office)
[redacted](mobile)

From: Brown, Eric (GOV)
Sent: Thursday, September 10, 2015 2:10 PM
To: 'Wurfel, Brad (DEQ)'
Subject: RE: Flint Water

Any update?

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 09, 2015 4:42 PM
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Subject: RE: Flint Water

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From: Brown, Eric (GOV)
Sent: Monday, September 14, 2015 10:11 AM
To: 'Hollins, Harvey (GOV)'
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Harvey,
Do you have time today to catch up on the Flint water issue? I'm free until 11:30, from 1-1:30, and from 4-5pm today. Let me know if any of those windows work for you.
--Eric

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From: Brown, Eric (GOV)
Sent: Monday, September 14, 2015 10:15 AM
To: Clayton, Stacie (GOV)
Subject: RE: Flint Water

Sorry Stacey, maybe I was unclear. I am available now until 11:30 today, at which point I have another meeting. Is there another time that would work?

From: Clayton, Stacie (GOV)
Sent: Monday, September 14, 2015 10:13 AM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: RE: Flint Water

Good Morning Eric,

Harvey is available at 11:30am today. I will send the appointment for you to call him in the office.

Stacie

From: Brown, Eric (GOV)
Sent: Monday, September 14, 2015 10:11 AM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Cc: Clayton, Stacie (GOV) <claytons3@michigan.gov>
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From: Brown, Eric (GOV)
Sent: Monday, September 14, 2015 10:25 AM
To: Clayton, Stacie (GOV)
Subject: Accepted: HH/EB Call re: Flint Water

From: Brown, Eric (GOV)
Sent: Monday, September 14, 2015 11:09 AM
To: 'Pallone, Maggie (DEQ)'
Subject: RE: Flint water

We need to catch up today. I'm available from 2:30-3:30 and from 4-5 today. Are you available for a phone call during those times?

From: Pallone, Maggie (DEQ)
Sent: Sunday, September 13, 2015 8:43 PM
To: Dickinson, Jordan <Jordan.Dickinson@mail.house.gov>
Cc: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: Flint water

Hi Jordan-
I wanted to reach out and let you know that we are working on pulling together an elected leaders briefing on Flint water for later this week or the following week. We plan on reaching out to EPA as well to have them participate via phone. If the Congressman does not plan on being back in town, we can loop him in as well.

Someone from my office will be reaching out to run by some dates and times.

Thanks so much. Please give me a call if you have any questions.

Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Monday, September 14, 2015 11:59 AM
To: Clayton, Stacie (GOV)
Subject: flint water

Stacie,
Thanks for pulling the call with Harvey together. Harvey and I decided we need to all get on the phone with DEQ to discuss this further. Could you help us set up a call with Maggie Pallone and Brad Wurfel at DEQ?

pallonem@michigan.gov
wurfelb@michigan.gov

Hopefully we can get this scheduled sometime tomorrow. I can make myself available any time after 10:30am tomorrow.

Thanks!
--Eric

Eric K Brown
Senior Federal Policy Representative
State of Michigan – Governor Rick Snyder
Washington D.C. Office
202.624.5840 (office)
[redacted](mobile)

From: Brown, Eric (GOV)
Sent: Tuesday, September 15, 2015 4:13 PM
To: Pallone, Maggie (DEQ)
Subject: FW: Flint water

Call me if you have a moment, please.

From: Dickinson, Jordan [mailto:Jordan.Dickinson@mail.house.gov]
Sent: Tuesday, September 15, 2015 4:12 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>; Fortin.Denise@epa.gov; Beckmann, Ronna Erin (beckmann.ronna@epa.gov) <beckmann.ronna@epa.gov>; Davis, CatherineM (Davis.CatherineM@epa.gov) <Davis.CatherineM@epa.gov>
Cc: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Flint water

Great! Thanks Maggie. The Congressman is actually going to be in Lansing next Monday. Do you think we could do the briefing at 9am in Lansing?

Thanks,

Jordan

From: Pallone, Maggie (DEQ) [mailto:PalloneM@michigan.gov]
Sent: Tuesday, September 15, 2015 3:57 PM
To: Dickinson, Jordan; Fortin.Denise@epa.gov; Beckmann, Ronna Erin (beckmann.ronna@epa.gov); Davis, CatherineM (Davis.CatherineM@epa.gov)
Cc: Brown, Eric (GOV)
Subject: RE: Flint water

Hi Jordan-
DEQ is also preparing a response to the letters from both Congressman Kildee and the Michigan legislators, in addition to providing a more thorough in person briefing on Flint water.

Thanks,
Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted]
PalloneM@michigan.gov

From: Dickinson, Jordan [mailto:Jordan.Dickinson@mail.house.gov]
Sent: Tuesday, September 15, 2015 1:48 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>; Fortin.Denise@epa.gov; Beckmann, Ronna Erin

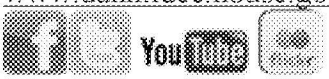
(beckmann.ronna@epa.gov) <beckmann.ronna@epa.gov>; Davis, CatherineM (Davis.CatherineM@epa.gov) <Davis.CatherineM@epa.gov>
Cc: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Flint water

Hi Maggie, Denise, Ronna and Cathy,

Thank you for the offer of providing a briefing my boss on this issue. I would like clarification that this briefing will be in addition to an official response from DEQ and EPA and will not supplant it.

Thank you,

Jordan Dickinson
Legislative Assistant
Congressman Dan Kildee (MI-05)
227 Cannon House Office Building
Washington, D.C. 20515
Phone: (202) 225-3611
www.dankildee.house.gov



Sign up for Congressman Dan Kildee's e-newsletter

From: Dickinson, Jordan
Sent: Sunday, September 13, 2015 9:18 PM
To: 'PalloneM@michigan.gov'
Cc: 'browne15@michigan.gov'
Subject: Re: Flint water

Hi Maggie,

The Congressman is in DC and the district this week so it will just depend on when the briefing is. Is the briefing going to supplant a response to our letter or is it separate?

Jordan Dickinson
Legislative Assistant
Congressman Dan Kildee (MI-05)
202-225-3611

From: Pallone, Maggie (DEQ) [mailto:PalloneM@michigan.gov]
Sent: Sunday, September 13, 2015 08:42 PM
To: Dickinson, Jordan
Cc: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: Flint water

Hi Jordan-

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Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted] cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Tuesday, September 15, 2015 4:15 PM
To: Pallone, Maggie (DEQ)
Subject: RE: Flint water

Ha, of course.

From: Pallone, Maggie (DEQ)
Sent: Tuesday, September 15, 2015 4:14 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Flint water

We are in a briefing on (surprise) flint water with our staff. Can I call you when its over?

From: Brown, Eric (GOV)
Sent: Tuesday, September 15, 2015 4:13 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
Subject: FW: Flint water

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Legislative Assistant
Congressman Dan Kildee (MI-05)
227 Cannon House Office Building
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Phone: (202) 225-3611
www.dankildee.house.gov

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Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Wednesday, September 16, 2015 3:28 PM
To: Bill McBride (mcbrideb@michigan.gov)
Subject: FW: Briefing for elected officials on Flint water

FYI

From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:26 PM
To: amgiasson@house.mi.gov; Neeley, Rep Sheldon <SheldonNeeley@house.mi.gov>; Phelps, Rep Phil <repphelps@house.mi.gov>; Michelle Carnevale <MCarnevale@senate.michigan.gov>; Andrew Leavitt <ALeavitt@senate.michigan.gov>; Dickinson, Jordan <Jordan.Dickinson@mail.house.gov>; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
Cc: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Lange, Michelle (GOV) <LangeM3@michigan.gov>; Ackerman, Darin (GOV) <ackermand3@michigan.gov>; Thelen, Mary Beth (DEQ) <THELENM2@michigan.gov>; Fortin.Denise@epa.gov; Brown, Eric (GOV) <BrownE15@michigan.gov>
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Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Wednesday, September 16, 2015 3:28 PM
To: Pallone, Maggie (DEQ)
Subject: RE: Briefing for elected officials on Flint water

Will there be a teleconference line?

From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:26 PM
To: angiesson@house.mi.gov; Neeley, Rep Sheldon <SheldonNeeley@house.mi.gov>; Phelps, Rep Phil <repphelps@house.mi.gov>; Michelle Carnevale <MCarnevale@senate.michigan.gov>; Andrew Leavitt <ALeavitt@senate.michigan.gov>; Dickinson, Jordan <Jordan.Dickinson@mail.house.gov>; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angell_chawla@peters.senate.gov; Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
Cc: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Lange, Michelle (GOV) <LangeM3@michigan.gov>; Ackerman, Darin (GOV) <ackermand3@michigan.gov>; Thelen, Mary Beth (DEQ) <THELENM2@michigan.gov>; Fortin.Denise@epa.gov; Brown, Eric (GOV) <BrownE15@michigan.gov>
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Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Wednesday, September 16, 2015 3:37 PM
To: Bill McBride (mcbrideb@michigan.gov)
Subject: FW: Briefing for elected officials on Flint water

From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:32 PM
To: amglasson@house.mi.gov; Neeley, Rep Sheldon <SheldonNeeley@house.mi.gov>; Phelps, Rep Phil <repphelps@house.mi.gov>; Michelle Carnevale <MCarnevale@senate.michigan.gov>; Andrew Leavitt <ALeavitt@senate.michigan.gov>; Dickinson, Jordan <Jordan.Dickinson@mail.house.gov>; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
Cc: Fortin.Denise@epa.gov; Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Briefing for elected officials on Flint water

I apologize that I didn't include information for a call in number in the first email. For those that will be calling in the information is below. Please let me know if you will be calling in as well.

1-888-[redacted]
Access code: [redacted]

Thank you,
Maggie

From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:25 PM
To: 'amglasson@house.mi.gov' <amglasson@house.mi.gov>; Neeley, Rep Sheldon <SheldonNeeley@house.mi.gov>; Phelps, Rep Phil <repphelps@house.mi.gov>; 'Michelle Carnevale' <MCarnevale@senate.michigan.gov>; 'Andrew Leavitt' <ALeavitt@senate.michigan.gov>; 'Dickinson, Jordan' <Jordan.Dickinson@mail.house.gov>; 'Bill_Sweeney@stabenow.senate.gov' <Bill_Sweeney@stabenow.senate.gov>; 'Anne_Stanski@stabenow.senate.gov' <Anne_Stanski@stabenow.senate.gov>; 'eric_feldman@peters.senate.gov' <eric_feldman@peters.senate.gov>; 'angeli_chawla@peters.senate.gov' <angeli_chawla@peters.senate.gov>; 'Johnson, Bentley (Peters)' <Bentley_Johnson@peters.senate.gov>
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Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted] cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Wednesday, September 16, 2015 3:38 PM
To: 'Pallone, Maggie (DEQ)'
Subject: RE: Briefing for elected officials on Flint water

Ha, all good.

From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:32 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: Briefing for elected officials on Flint water

Thanks, one of those days.

From: Brown, Eric (GOV)
Sent: Wednesday, September 16, 2015 3:28 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
Subject: RE: Briefing for elected officials on Flint water

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Maggie

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Policy and Legislative Affairs
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[redacted](cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Friday, September 18, 2015 2:50 PM
To: Bill McBride (mcbrideb@michigan.gov)
Subject: FW: Briefing for elected officials on Flint water

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Friday, September 18, 2015 2:34 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>; amglasson@house.mi.gov; Neeley, Rep Sheldon <SheldonNeeley@house.mi.gov>; Phelps, Rep Phil <repphelps@house.mi.gov>; Michelle Carnevale <MCarnevale@senate.michigan.gov>; Dickinson, Jordan <Jordan.Dickinson@mail.house.gov>; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters) <Bentley_Johnson@peters.senate.gov>
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Subject: Re: Briefing for elected officials on Flint water

Hi Maggie,

Senator Ananich has come to the conclusion that this meeting must also have staff from DHHS Childhood Lead Poisoning and Prevention team as well as a medical officer from DHHS, preferably an epidemiologist or a physician that who works with incidences of elevated lead.

Thank you for you help,

Andy

From: "Pallone, Maggie (DEQ)" <PalloneM@michigan.gov>
Date: Wednesday, September 16, 2015 at 3:25 PM
To: "amglasson@house.mi.gov" <amglasson@house.mi.gov>, "Neeley, Rep Sheldon" <SheldonNeeley@house.mi.gov>, "Phelps, Rep Phil" <repphelps@house.mi.gov>, Michelle Carnevale <mcarnevale@senate.michigan.gov>, Andy Leavitt <aleavitt@senate.michigan.gov>, "Dickinson, Jordan" <Jordan.Dickinson@mail.house.gov>, "Bill_Sweeney@stabenow.senate.gov" <Bill_Sweeney@stabenow.senate.gov>, "Anne_Stanski@stabenow.senate.gov" <Anne_Stanski@stabenow.senate.gov>, "eric_feldman@peters.senate.gov" <eric_feldman@peters.senate.gov>, "angeli_chawla@peters.senate.gov" <angeli_chawla@peters.senate.gov>, "Johnson, Bentley (Peters)" <Bentley_Johnson@peters.senate.gov>
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Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

From: Brown, Eric (GOV)
Sent: Thursday, September 24, 2015 2:38 PM
To: Muchmore, Dennis (GOV)
Subject: Accepted: FW: Conf Call re Flint Water

From: Brown, Eric (GOV)
Sent: Monday, September 28, 2015 3:20 PM
To: Mcbride, Bill (GOV)
Subject: RE: FOR IMMEDIATE RELEASE: Senate Minority Leader Jim Ananich Urges Governor, State Action in Flint

No meeting goes unpunished

From: Mcbride, Bill (GOV)
Sent: Monday, September 28, 2015 3:17 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: FW: FOR IMMEDIATE RELEASE: Senate Minority Leader Jim Ananich Urges Governor, State Action in Flint
Importance: High

FOR IMMEDIATE RELEASE
September 28, 2015

Contact: Angela Wittrock
517.775.1430

Senate Minority Leader Jim Ananich Urges Governor, State Action in Flint

FLINT, Mich.—Senate Minority Leader Jim Ananich (D-Flint) issued the following statement:

"My constituents and I believe the state must act urgently to provide concrete solutions to the public health crisis in the City of Flint. In speaking with Governor Snyder and his key aides today, I stressed the need to work together on a number of initiatives that will ensure safe water for Flint residents.

"My formal request included immediate and long-term solutions, including strong consideration for switching back to the Detroit water source until the Karegnondi Pipeline Authority project is complete. Anything less than an aggressive, comprehensive approach is simply unacceptable."

A copy of Senator Ananich's letter to Governor Snyder can be viewed here.

###

Angela Wittrock
Press Secretary
Senate Minority Leader Jim Ananich

Boji Tower, Second Floor | Lansing, MI 48909-7536

P: 517.373.1339
C: [redacted]

Please sign up for our e-news at: Senatedems.com/Ananich
Facebook: jimananich | Twitter: @jimananich

From: Brown, Eric (GOV)
Sent: Thursday, October 01, 2015 9:51 AM
To: Hertel, Elizabeth (DHHS)
Subject: Flint

Elizabeth,
Could you give me a call this morning? I need to discuss a few things with you about Flint water. My direct line is (202) 624-3646. Thanks!
--Eric

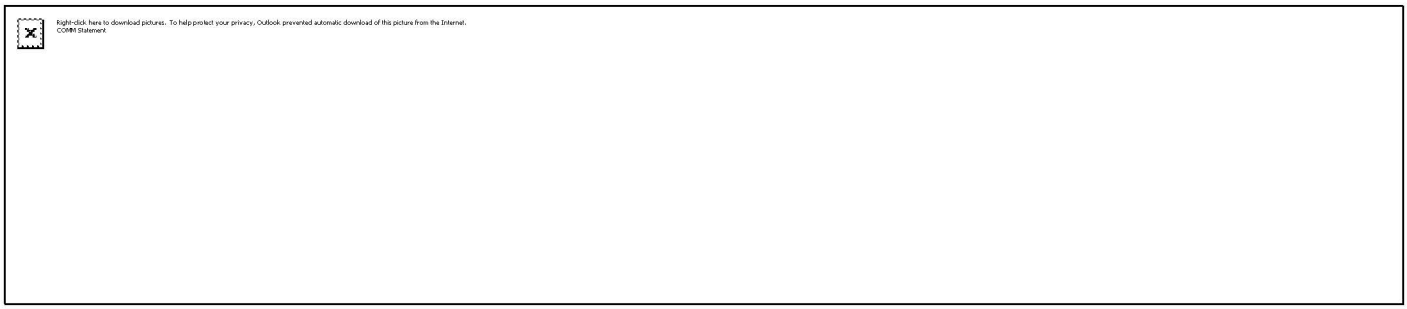
Eric K Brown
Senior Federal Policy Representative
State of Michigan – Governor Rick Snyder
Washington D.C. Office
202.624.5840 (office)
[redacted](mobile)

From: Brown, Eric (GOV)
Sent: Tuesday, December 29, 2015 2:51 PM
To: [redacted]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Things you may find interesting:

1. Press release on today's action
2. Michigan Auditor General report on situation, released late last week: http://www.audgen.michigan.gov/finalpdfs/15_16/l761032015.pdf

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Brown, Eric (GOV) BrownE15@michigan.gov
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

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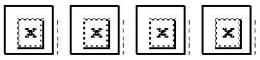
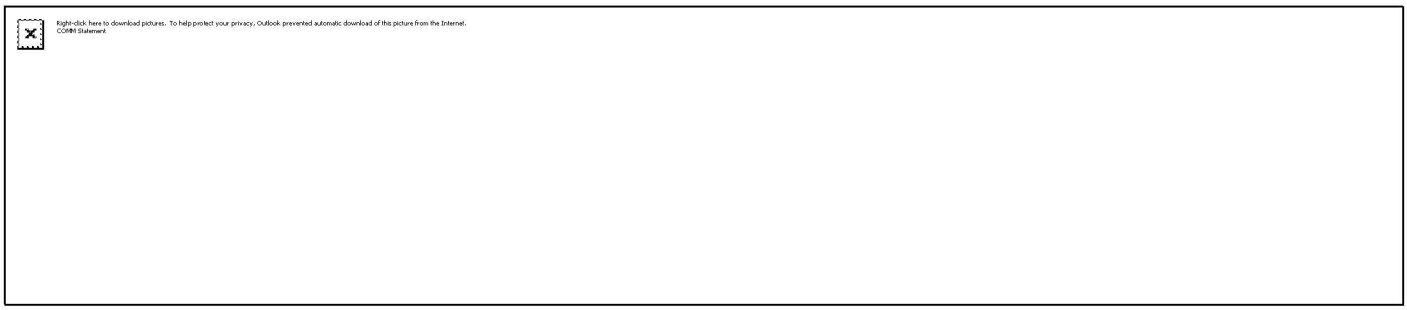


This email was sent to browne15@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Brown, Eric (GOV)
Sent: Tuesday, December 29, 2015 3:44 PM
To: 'Taylor, Nicole (GOV)'
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Could you send this around to delegation chiefs as an FYI? Thanks!

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



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From: Brown, Eric (GOV)
Sent: Tuesday, December 29, 2015 3:51 PM
To: 'Taylor, Nicole (GOV)'
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

All in a day's work. With that, let's call it quits.

From: Taylor, Nicole (GOV)
Sent: Tuesday, December 29, 2015 3:50 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Done!

From: Brown, Eric (GOV)
Sent: Tuesday, December 29, 2015 3:44 PM
To: Taylor, Nicole (GOV) <TaylorN7@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Could you send this around to delegation chiefs as an FYI? Thanks!

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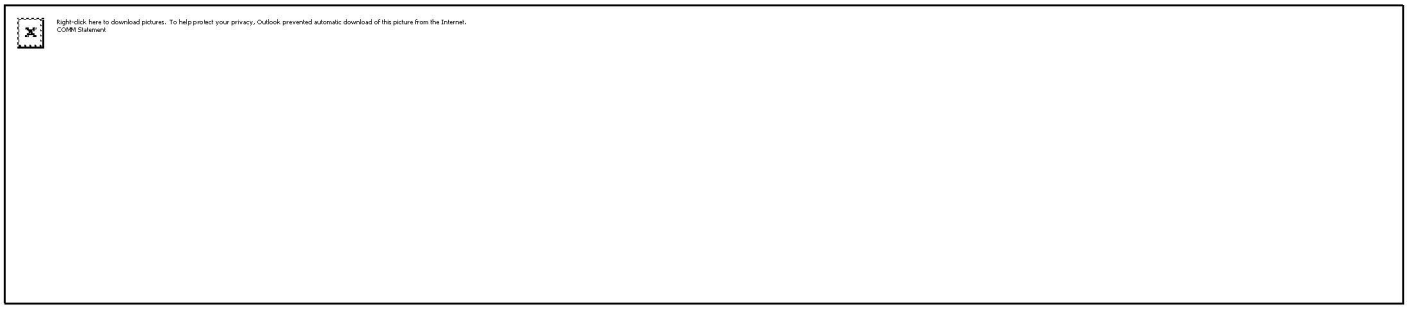

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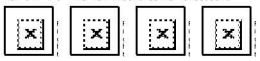

This email was sent to browne15@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Wurfel, Brad (DEQ)
Sent: Wednesday, June 10, 2015 3:14 PM
To: Brown, Jessica (GOV)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

The standard they're required to meet is based on the average of the last four quarters of testing. That means several rounds of violation are usually required to trip the standard going in, but it also means that it takes several quarters' worth of clean test results to average it back off. And their results from last … August, I think, were pretty high.

As noted in the language of the original note, ". It is however, important to note that all individual compliance sample results collected in both May and February were below the 0.080 mg/L levels."

Make more sense?

From: Brown, Jessica (GOV)
Sent: Wednesday, June 10, 2015 1:59 PM
To: Wurfel, Brad (DEQ)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Hi Brad,

I know you touched on this below and I read the letter, but I'm missing something here. When you get a minute can you explain how the city gets a violation letter if the water is technically fine? Am I right in my understanding that one testing location was still above .080 mg/L when testing was done in May but as of today, in June, all testing locations meet the requirement and are now under .080 mg/L?

Jess

From: Wurfel, Brad (DEQ)
Sent: Tuesday, June 09, 2015 3:45 PM
To: Brown, Jessica (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Cc: Smith, Jennifer (DCH); Wheaton, Bob (DHS)
Subject: FW: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Heads up, Flint is about to get another one of those letters from us. This is once again about the Total Trihalo Methanes. They remain in violation of the standard. The water is fine, but because the standard is based on the average of four quarterly tests, it takes awhile for the 'violation' status to work its way out of the numbers.

So it may get press, but it's not indicative of actual water quality violation in the present sense.
b

From: Busch, Stephen (DEQ)
Sent: Tuesday, June 09, 2015 12:39 PM
To: Howes, Sarah (DEQ); Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ); Thelen, Mary Beth (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Attached is a copy of the Violation Notice and Public Notice Template being mailed to the City of Flint by the DEQ Office of Drinking Water and Municipal Assistance regarding an exceedance of the Maximum Contaminant Level (MCL) standard for Total Trihalomethanes at certain locations within the City's drinking water distribution system.

This violation notice is in response to updated monitoring completed in May 2015, which shows the locational running annual average for one of the City's eight compliance sampling locations continues to exceed MCL standard of 0.080 mg/L. It is however, important to note that all individual compliance sample results collected in both May and February were below the 0.080 mg/L levels.

You are being provided an electronic copy of this notice as exceedance of this drinking water standard is expected to generate inquiries from water system customers, news media, and the general public.

Sarah Howes or Maggie Pallone will be informing members of the Michigan legislature.

If you have any questions or would like any additional information, you may contact Michael Prysby, District Engineer, DEQ-ODWMA at 517-290-8817, or you may contact me at the number below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Brown, Jessica (GOV)
Sent: Wednesday, September 30, 2015 2:00 PM
To: Tommasulo, Karen (DEQ)
Subject: RE: 151001. Flint drinking water communications plan (4)

Thanks much!

From: Tommasulo, Karen (DEQ)
Sent: Wednesday, September 30, 2015 1:54 PM
To: Brown, Jessica (GOV) <BrownJ53@michigan.gov>
Subject: FW: 151001. Flint drinking water communications plan (4)

This is all we've actually sent over to your office so far, but it'll give you a rough idea. There's plenty more coming.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 30, 2015 1:10 PM
To: Wurfel, Sara (GOV); Tommasulo, Karen (DEQ)
Subject: 151001. Flint drinking water communications plan (4)

Karen, nice work.
Sara, here's the comms plan.
b

From: Biehl, Laura (GOV)
Sent: Monday, November 09, 2015 11:13 AM
To: Clayton, Stacie (GOV)
Subject: RE: Steve Hood Interview Request

Sure I'll email him.

From: Clayton, Stacie (GOV)
Sent: Monday, November 09, 2015 9:56 AM
To: Biehl, Laura (GOV) <BiehlL@michigan.gov>
Cc: Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>
Subject: RE: Steve Hood Interview Request

Thank you, Laura. Can you respond and let him know that (or I can if you like) so it doesn't seem as if the request is being ignored?

Stacie

From: Biehl, Laura (GOV)
Sent: Monday, November 09, 2015 9:52 AM
To: Clayton, Stacie (GOV) <claytons3@michigan.gov>; Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>
Cc: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Emmitt, Beth (GOV) <emmittb@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Steve Hood Interview Request

We have this on our list of requests and will get back with Steve as soon as we have an available time.

From: Clayton, Stacie (GOV)
Sent: Monday, November 09, 2015 9:46 AM
To: Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>
Cc: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Emmitt, Beth (GOV) <emmittb@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Steve Hood Interview Request

Hi Jordan,

Steve Hood called again this morning. It's been 3 weeks since he made his request and he has not heard from anyone with a response. Will you please assist with someone in communications responding to him?

Thank you,
Stacie

From: Clayton, Stacie (GOV)
Sent: Tuesday, October 20, 2015 1:00 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>

Cc: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Emmitt, Beth (GOV) <emmittb@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
Subject: FW: Interview Request

Sara,

Harvey asked me to follow up on this request from Steve Hood. Does it look like this is something that can happen next week while the education plan is still top of mind?

Stacie

From: Steve Hood [redacted]
Sent: Monday, October 19, 2015 11:00 AM
To: 'wurfels@michigan.gov' <wurfels@michigan.gov>
Subject: Interview Request

Sarah, I need 10 minutes with the Governor the week of the 26th to talk education and Flint Water. We can come to a location of his choosing.
Let me know if we can make this work.

RONIN AMERICA
14450 SCRIPPS
DETROIT, MI 48215
EMAIL [redacted]
Ph: [redacted]

Message

From: Biehl, Laura (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BIEHL LAURA9E1]
Sent: 12/29/2015 7:54:13 PM
To: 'mdolan2@freepress.com' [mdolan2@freepress.com]
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Hi Matt- Not sure why you didn't get the statement. Please confirm you receive this. Checking our lists now to make sure there isn't an issue w/ your email.

You usually get our releases right?

Laura Biehl

Deputy Press Secretary

Executive Office of Michigan Gov. Rick Snyder

George W. Romney Building

111 S. Capitol Ave.

Lansing, MI 48933

Office: 517-335-6397

[redacted]

BiehlL@Michigan.gov

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Biehl, Laura (GOV) <BiehlL@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Governor Rick Snyder
REINVENTING MICHIGAN
Getting It Right. Getting It Done.

Statement

Contacts: Dave Murray, Anna Heaton or Laura Biehl

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From: Biehl, Laura (GOV)
Sent: Tuesday, December 29, 2015 3:00 PM
To: Holland, Meegan (GOV)
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Laura Biehl
Deputy Press Secretary
Executive Office of Michigan Gov. Rick Snyder
George W. Romney Building
111 S. Capitol Ave.
Lansing, MI 48933
Office: 517-335-6397
[redacted]
BiehlL@Michigan.gov

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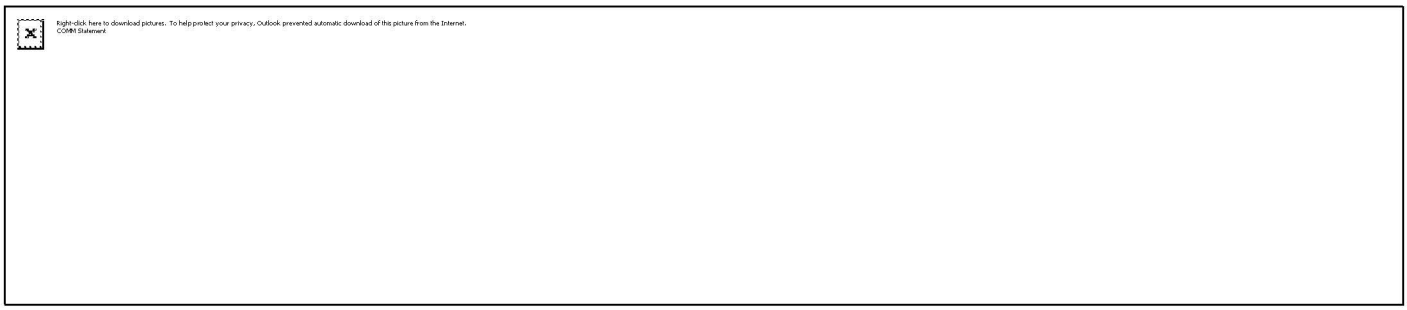

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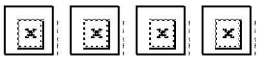

This email was sent to biehll@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

Message

From: Biehl, Laura (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BIEHL LAURA9E1]
Sent: 12/29/2015 8:00:54 PM
To: 'Dolan, Matthew' [msdolan@freepress.com]; Murray, David [DMurray@greatfallstribune.com]
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Looks like there was a delay in the system we use to send our releases... sorry about that Matt!

Laura Biehl

Deputy Press Secretary

Executive Office of Michigan Gov. Rick Snyder

George W. Romney Building

111 S. Capitol Ave.

Lansing, MI 48933

Office: 517-335-6397

[redacted]

BiehlL@Michigan.gov

From: Dolan, Matthew [mailto:msdolan@freepress.com]
Sent: Tuesday, December 29, 2015 3:00 PM
To: Murray, David <DMurray@greatfallstribune.com>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Werid, just got it now. Wonder why the long delay....

Matt Dolan

Detroit Free Press

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Dolan, Matthew <msdolan@freepress.com>
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Statement

Contacts: Dave Murray, Anna Heaton or Laura Biehl

517-335-6397

FOR IMMEDIATE RELEASE
Tuesday, Dec. 29, 2015

Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Changes to take place at DEQ, meeting planned with Mayor Karen Weaver

In response to initial findings from the Flint Water Task Force, Gov. Rick Snyder today issued the following statement:

"When I became aware that the city of Flint's water showed elevated lead levels and that the state's handling of the situation was being questioned, I requested funding to switch the source back to the Great Lakes Water Authority and appointed an independent task force to identify possible missteps and areas for improvement.

"The task force has done an exceptional job, reviewing stacks of documents and interviewing scores of Flint, Genesee County, state and federal officials. Although the task force's final report is not yet completed, members have made me aware of some interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

"We'll continue to work with the community members to make sure we hear and respond to their concerns.

“In addition, MDEQ Director Dan Wyant has offered his resignation, and I’ve determined that it’s appropriate to accept it. I’m also making other personnel changes at MDEQ to address problems cited by the task force.

“But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water. Let’s share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we’re using the very best testing protocols to ensure Flint residents have safe drinking water and that we’re taking steps to protect their health over the short and long term.

“I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure.

“I know many Flint citizens are angry and want more than an apology. That’s why I’m taking the actions today to ensure a culture of openness and trust. We’ve already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we’re going to meet soon to discuss other ways the state can offer assistance.

“These are only initial steps - we fully expect to take more actions following the recommendations of our task force. When it comes to matters of health and quality of life, we’re committed to doing everything we can to protect the well-being of our citizens.”

###

STAY CONNECTED:

This email was sent to msdolan@freepress.com on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Biehl, Laura (GOV)
Sent: Tuesday, December 29, 2015 3:03 PM
To: 'Dolan, Matthew'
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

I honestly think the computers have a mind of their own…

Laura Biehl
Deputy Press Secretary
Executive Office of Michigan Gov. Rick Snyder
George W. Romney Building
111 S. Capitol Ave.
Lansing, MI 48933
Office: 517-335-6397
[redacted]
BiehlL@Michigan.gov

From: Dolan, Matthew [mailto:msdolan@freepress.com]
Sent: Tuesday, December 29, 2015 3:02 PM
To: Biehl, Laura (GOV) <BiehlL@michigan.gov>; Murray, David <DMurray@greatfallstribune.com>
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Ah thanks! Hopefully I'll be first in line next time. LOL.

Matt Dolan
Detroit Free Press

From: Biehl, Laura (GOV) [mailto:BiehlL@michigan.gov]
Sent: Tuesday, December 29, 2015 3:01 PM
To: Dolan, Matthew <msdolan@freepress.com>; Murray, David <DMurray@greatfallstribune.com>
Subject: RE: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Looks like there was a delay in the system we use to send our releases… sorry about that Matt!

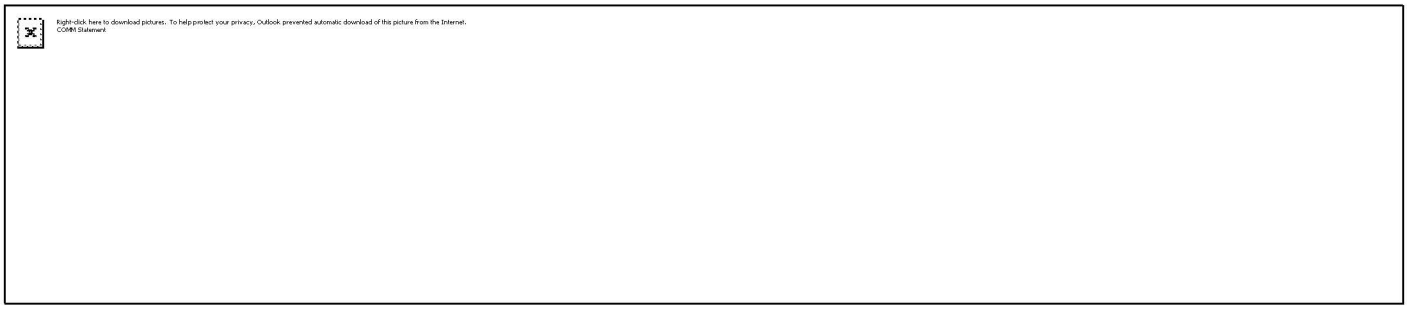
Laura Biehl
Deputy Press Secretary
Executive Office of Michigan Gov. Rick Snyder
George W. Romney Building
111 S. Capitol Ave.
Lansing, MI 48933
Office: 517-335-6397
[redacted]
BiehlL@Michigan.gov

From: Dolan, Matthew [mailto:msdolan@freepress.com]
Sent: Tuesday, December 29, 2015 3:00 PM
To: Murray, David <DMurray@greatfallstribune.com>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
Subject: FW: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force

Werid, just got it now. Wonder why the long delay....

Matt Dolan
Detroit Free Press

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Tuesday, December 29, 2015 2:45 PM
To: Dolan, Matthew <msdolan@freepress.com>
Subject: NEWS RELEASE: Gov. Rick Snyder takes action on initial findings from Flint Water Task Force



Contacts: Dave Murray, Anna Heaton or Laura Biehl

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interim findings and corrective steps that I have decided to take immediately in order to restore trust in how the state keeps its citizens safe and informed.

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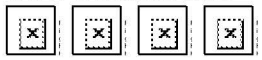
###

STAY CONNECTED:



This email was sent to msdolan@freepress.com on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Thelen, Mary Beth (DEQ)
Sent: Monday, December 28, 2015 10:47 AM
To: Holland, Meegan (GOV)
Subject: RE: Auditor General Letter – City of Flint Drinking Water

Dan will get back to you in a few minutes with a change. Thanks.

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Holland, Meegan (GOV)
Sent: Monday, December 28, 2015 10:12 AM
To: Wyant, Dan (DEQ)
Subject: RE: Auditor General Letter – City of Flint Drinking Water

Dan –

Dave shared with me the draft of the report. We're eager for the OAG to release this. Meanwhile, I wrote a summary of the conclusions for the Governor's senior staff. Could you read this for accuracy? I'd very much appreciate your feedback.

We will likely give a version of this to reporters who ask about the auditor's letter.

Regards, Meegan

Here is a summary of answers from the Office of the Auditor General in response to questions mostly posed by Sen. Jim Ananich's office (the auditor added a few questions in the 11-page report). The questions came as the OAG conducts an audit of the Office of Drinking Water and Municipal Assistance's handling of the Flint water crisis.

Conclusions:

While the City Council voted in March 2013 to move to the KWA pipeline, it didn't designate the Flint River as an interim water source. But the DEQ had approved the river as a backup source for emergency purposes in 2006. The treated water met safety standards in quarterly tests by the Flint WTP, but Flint had never tested its effect on the distribution system.

In an email review of key DEQ managers to determine if there was an effort to conceal information, only one email exchange raised red flags. The EPA had asked DEQ in February 2015 if Flint had a corrosion control program; the DEQ

responded the city had an optimized program in place. But in April the EPA asked again, and the DEQ said that the Flint Water Treatment Plant (WTP) was not doing corrosion control. DEQ later explained that the first answer was referring to its LCR program, in which it monitors a new water source (in this case, the Flint river) for lead/copper for two consecutive six-month periods to determine if corrosion treatment is necessary. The report says there's no reason to believe that DEQ willfully misrepresented information to the EPA. It also concludes that ODWMA employees appeared to have notified management properly about the unfolding Flint water situation.

DEQ did not consult with the EPA on how best to apply the Lead and Copper Rule (LCR) monitoring practices after the switch to Flint water, but from past experience, DEQ believed it was doing so correctly by doing two rounds of six-month monitoring on the new water source before determining optimal corrosion control. The EPA disagreed with DEQ's interpretation of the LCR, but later stated that the LCR was open to interpretation. It then clarified the rule; the upshot: corrosion controls already in place when Flint was on Detroit water should have been maintained after the switch.

DEQ should have notified the Flint WTP to start corrosion controls once the first round of six-month sampling results arrived in late March 2015 and showed the water exceeded acceptable lead levels.

DEQ doesn't oversee the Flint WTP so it doesn't have any accountability measures to ensure the WTP is collecting water samples from tier 1 homes, i.e., residences with lead service lines, soldering or plumbing. Instead, DEQ relies on Flint's certification of sample sites. The auditor suggests DEQ should consider an independent verification of the sampling pool or Flint's certifications. In November 2015, Flint admitted that it had no way to ensure the sites were all tier 1. Water samples came from 175 randomly distributed testing bottles. DEQ has asked Flint to verify its prior samples by this Wednesday (12/30).

There's been controversy that DEQ dropped two sampling sites with high lead levels from its second six-month review. It was appropriate for DEQ to do so because those sites did not meet federal criteria. It was also appropriate for DEQ to require flushing taps the night before sampling to ensure faucets didn't contain overly stagnant water.

Charts show that most water samples were taken in the sixth month of the six-month testing period. The report said it's tough to determine if the lateness of the sampling affects the accuracy.

The report ends with an excellent timeline. I have attached the report in case you want to review the timeline on page 11.

From: Wyant, Dan (DEQ)
Sent: Monday, December 28, 2015 9:49 AM
To: Snyder, Rick (GOV) <[redacted]>; Scott, Allison (GOV) <scotta12@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Holland, Meegan (GOV) <HollandM2@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>
Cc: Wyant, Dan (DEQ) <WyantD@michigan.gov>
Subject: FW: Auditor General Letter – City of Flint Drinking Water

FYI – Please see the attached letter. The Auditor General findings are consistent with the DEQ's own internal review. The Auditor General delivered the letter to Senator Ananich late Wednesday, December 23, 2015.

Please call me if you have any questions.

Dan Wyant
Director

Attachment

From: MI_Office_of_the_Auditor_General [mailto:mi_auditor_general@audgen.michigan.gov]
Sent: Wednesday, December 23, 2015 3:18 PM
To: aleavitt@senate.michigan.gov; sstudley@senate.michigan.gov
Cc: Hirst, Laura (OAG); Ringler, Doug (OAG); Wyant, Dan (DEQ); Sygo, Jim (DEQ)
Subject: Auditor General Letter – City of Flint Drinking Water

Please see the attached letter, which addresses your questions about the City of Flint's drinking water.

We stand ready to answer any questions that you may have. Thank you.

From: Hollins, Harvey (GOV)
Sent: Monday, December 28, 2015 5:14 PM
To: Holland, Meegan (GOV)
Subject: Re: Update on OAG letter and our statement

I agree. By the way, you did an awesome job on the phone call with the Gov on the 24th. Happy New Year.

Best,
Harvey

On Dec 28, 2015, at 4:12 PM, Holland, Meegan (GOV) <HollandM2@michigan.gov> wrote:

> Thanks Harvey! And geez – at some point it would be great to meet you face to face! I hope to get to Detroit sooner rather than later.
>
> Best,
> Meegan
>
> ---
>
> **From:** Hollins, Harvey (GOV)
> **Sent:** Monday, December 28, 2015 4:07 PM
> **To:** Holland, Meegan (GOV) <HollandM2@michigan.gov>; Calley, Brian (GOV) <[redacted]>; Snyder, Rick (GOV) <[redacted]>; Walsh, John (GOV) <WalshJ@michigan.gov>; Redford, James (GOV) <RedfordJ@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Clement, Elizabeth (GOV) <clemente@michigan.gov>; Scott, Allison (GOV) <scotta12@michigan.gov>
> **Subject:** RE: Update on OAG letter and our statement
>
> Meegan—attached are a couple edits to the statement.
>
> ---
>
> **From:** Holland, Meegan (GOV)
> **Sent:** Monday, December 28, 2015 2:09 PM
> **To:** Calley, Brian (GOV) <[redacted]>; Snyder, Rick (GOV) <[redacted]>; Walsh, John (GOV) <WalshJ@michigan.gov>; Redford, James (GOV) <RedfordJ@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Clement, Elizabeth (GOV) <clemente@michigan.gov>; Scott, Allison (GOV) <scotta12@michigan.gov>
> **Subject:** Update on OAG letter and our statement
>
> Colleagues,
>
> The Office of the Auditor General has released the letter. We've developed a statement, based on the summary you read the other night, that spells out how things came down. We hope media will pick up on the fact that the DEQ was largely following protocols, or in one case, an ambiguous one that EPA later clarified.

FYI - Sen. Ananich has released the following in regard to the OAG letter: "The Auditor General has provided an important piece of this puzzle and I'm sure the extended report they are working on will reveal additional information," said Ananich. "What's clear is that corrosion control should have been used and there are serious failings in our system that must be addressed. Between the FOIA emails released recently and these findings, it's obvious that legislative oversight is the best way to see how all of these pieces fit together. I expect holding hearings to be high on the agenda when the Legislature returns."

On Tuesday, we plan to release this statement by the Governor. It's been tweaked slightly since our review the other night, thanks to feedback from the Governor, Jim Redford and others.

"I've been briefed on the recent meeting of the task force studying the Flint water situation and I've read the report from the Office of the Auditor General on the processes used by DEQ to monitor Flint water.

"The bi-partisan task force has worked tirelessly to interview Flint, Genesee County, state and federal officials to complete its independent analysis. They are reviewing hundreds of documents at all levels of government and from the public health science community.

"I'd like to thank the task force for keeping me apprised of their continuing investigation. As they uncover more facts, it's clear to me we can do better. Their report may take another month or so, but if we need to make changes more swiftly, I plan to take immediate action.

"No matter what the testing requirements were, they were not enough to prevent this crisis.

"When it comes to matters of health and quality of life, we're committed to doing everything we can to protect the well-being of our citizens.

"I understand there can be disagreements within the scientific community. That is why I have told my directors at MDEQ and DHHS to invite every external scientist who has worked on the Flint water issue to the state laboratory facilities to work as partners with us. Together, we should be able to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're doing proper monitoring and remediation of blood levels and other health impacts over the long term.

"I want the Flint community and all citizens of Michigan to know how very sorry I am that this has happened.

"But I know an apology isn't enough. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. On Thursday, I called Flint Mayor Karen Weaver, and we're going to sit down in the next week to discuss other ways the state can offer assistance.

"I want to assure residents there that we will work hard to make things right."

Meegan Holland

Director of Communications for Gov. Rick Snyder
Office: 517-335-6397
[redacted]
Twitter: @meholland

From: Holland, Meegan (GOV)
Sent: Monday, December 28, 2015 4:29 PM
To: Lyon, Nick (DHHS); Wyant, Dan (DEQ)
Subject: Governor's statement

Hi Nick and Dan,

Senior staff in the Governor's office has been crafting a communications plan for the next couple weeks concerning the Flint water crisis, and I wanted to keep you in the loop.

We're putting out our summary to media about the OAG's letter, released today. Gov. Snyder has set up a meeting with Flint Mayor Karen Weaver for next week. And we're releasing this statement (which still may go through a few more tweaks). It may go out tomorrow, possibly Wednesday:

"I've been briefed on the recent meeting of the task force studying the Flint water situation and I've read the report from the Office of the Auditor General on the processes used by DEQ to monitor Flint water.
"The bi-partisan task force is working tirelessly to interview Flint, Genesee County, state and federal officials to complete its independent analysis. They are reviewing hundreds of documents at all levels of government and from the public health science community.
"I'd like to thank the task force for keeping me apprised of their continuing investigation. As they uncover more facts, it's clear to me we can do better. Their report may take another month or so, but if we need to make changes more swiftly, I plan to take immediate action.
"No matter what the testing requirements were, they were not enough to prevent this crisis.
"When it comes to matters of health and quality of life, we're committed to doing everything we can to protect the well-being of our citizens.
"I understand there can be disagreements within the scientific community. That is why I have told my directors at MDEQ and DHHS to invite every external scientist who has worked on the Flint water issue to the state laboratory facilities to work as partners with us. Together, we should be able to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're doing proper monitoring and remediation of blood levels and other health impacts over the long term.
"These are only initial steps in our corrective actions. We fully expect to take more actions following the recommendations of our independent task force."
"I want the Flint community and all citizens of Michigan to know how very sorry I am that this has happened.
"But I know an apology isn't enough. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. On Thursday, I called Flint Mayor Karen Weaver, and we're going to sit down in the next week to discuss other ways the state can offer assistance.
"I want to assure residents there that we are working hard to resolve this crisis."

Please feel free to contact me if you have any questions.

- Meegan
-

Meegan Holland
Director of Communications for Gov. Rick Snyder
Office: 517-335-6397
[redacted]
Twitter: @meholland

From: Lasher, Geralyn (DHHS)
Sent: Tuesday, December 29, 2015 4:50 PM
To: Brownfield, Michael (GOV); Lyon, Nick (DHHS)
Cc: Becker, Timothy (DHHS)
Subject: RE: State of the State update
Attachments: Timeline 12 29 15.docx

Mike---I am sorry to do this, but please use this updated timeline on the Flint water issue instead of the one I sent earlier today. Unfortunately the earlier version did not have some additional detail regarding some of our public messaging on this issue. This should be reflected in this new version.

Thanks.

From: Lasher, Geralyn (DHHS)
Sent: Tuesday, December 29, 2015 4:07 PM
To: Brownfield, Michael (GOV) <BrownfieldM2@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>
Cc: Becker, Timothy (DHHS) <beckert1@michigan.gov>
Subject: RE: State of the State update

Mike---Tim and I have worked to come up with some additional information for you on our topics. Attached you will find:

1. Document titled "Timeline 12 29 15" that will give you the timeline of the Flint Water situation from MDHHS.
2. Document titled "MDHHS ISD Overview" that will give you additional Integrated Service Delivery detail from item B in your outline.
3. Document titled "Opportunities for Improved Outcomes for Families" that will give you additional information for items A.1 and A.3

We still need to work a bit more on item A.2. from the outline so we will see what we can get to you after the first of the year.

Please let us know if this is helpful and what additional information you may need.

Thanks--g

From: Brownfield, Michael (GOV)
Sent: Tuesday, December 22, 2015 3:59 PM
To: Lyon, Nick (DHHS) <LyonN2@michigan.gov>
Cc: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>
Subject: State of the State update

Nick,

Geralyn provided some great info to help me put together the Quality of Life section of the governor's state of the state address (pasted below).

The governor is generally happy with how it's laid out, but he says it needs additional detail and some further work / development. He also noted that the integrated service delivery section will depend on budget issues and hopes that makes the cut, but I think he will want additional detail there, as well. (Detail in this case means more info in the outline, but also supporting briefs and other documents on the proposals).

This is well outside of my wheelhouse, so I'm hoping you can provide some assistance on this. I'm sending the governor another update on the state of the state outline at the end of the day tomorrow, then will be providing him additional materials next week (and after the New Year, of course).

I'm available to talk tomorrow if you want to catch up then.

Thanks,

Mike

Michigan Department of Health and Human Services
Flint Water: Timeline of Key Events

1 PRE JULY 2015

- Fall 2014 – Genesee County Health Department (GCHD) identified increase in cases of Legionella; MDHHS assisted GCHD in Epidemiologic analysis
- January 2015: MDHHS assisted with case interviews
- 6-4-15 Final Legionellosis outbreak report sent to Genesee County Health Department and discussed with Centers for Disease Control and Prevention. There were 45 cases laboratory confirmed cases of legionella. Healthcare-associated Legionella was suspected for a subset of cases. Results demonstrated that over half (27/45) of the cases had a healthcare facility exposure in the two weeks prior to their illness onset. In response, the healthcare facility has implemented multiple environmental and procedural measures to alleviate the situation.
    - The source of water at the primary residence was evaluated for all cases. Twenty-one of 45 (47%) cases occurred in people whose residence received City of Flint water. Of the 18 persons that did not report healthcare visits, 8 (44%) were exposed to Flint water at their home.
    - Ten cases had no exposure to a Flint hospital in the 2 weeks prior to illness nor were their homes on the Flint water system.
    - Other possible exposures were evaluated and no other known community exposures were identified.
    - Enhanced surveillance has continued for the remainder of 2015.
- 2-26-2015 - (2 calls) initiated by LeAnn Walters. Contacted Childhood Lead Poisoning Prevention Program-CLPPP (Karen Lishinski) – Ms. Walters expressed concern about Flint water quality and provider refusing to test her children; during second call she related that provider agreed to testing
- 3-4-2015 - (1 call) LeAnn Walters contacted CLPPP because child had elevated blood lead level; city officials wouldn't talk to her about her water; Karen provided EPA contact information

2 JULY 2015

- 7-22-15 Contact from Mark Johnson U.S. Agency for Toxic Substances and Disease Registry (ATSDR) to L. Dykema regarding Flint drinking water status; asking if Environmental Health was engaged
- 7-23-15 Director office inquiry forwarded to Population Health Administration for review/response
- 7-23-15 Division of Environmental Health (Dykema) contacted DEQ for update on drinking water testing/status. S. Busch relates that city in compliance with lead copper rule; one house with high lead level in water was an anomaly as house was connected to old water main but had since been corrected. This home was the residence of LeAnne Walters from 3-4-15 calls.

- 7-24-15 Childhood Lead Poisoning Prevention Program (CLPPP) requests assistance from Epidemiology to assess magnitude of change in 2014 Blood Lead Levels (in children) for city of Flint
    - Results indicate percentage of Elevated Blood Lead Levels (EBLs) for summer 2014, followed seasonal trends and the levels showed decrease by October. Further analysis would be needed to establish causation.
- 7-28-15 Response sent to Director's office

3 AUGUST 2015

- 8-4-15 Meeting with Governor's office and Flint pastors. Flint pastors had information provided to Director in response to 7-23-15 inquiry
- 8-6-15 Informal request from Liane Shekter Smith (DEQ) to Kory Groetsch MDHHS-Division of Environmental Health (DEH) after a meeting (unrelated to Flint situation) to assist with health education regarding lead in drinking water. MDHHS-DEH-supervisor made aware of request.
- 8-24-15 Dr. Mona Hanna Attisha contacts Genesee County Health Department for Blood Lead Level data/information
- 8-31-15 DEH staff meet to discuss communication plan for Flint/DEQ per request from DEQ

4 SEPTEMBER 2015

- 9-2-15 Marc Edwards contacts Bob Scott regarding Flint BLL data
- 9-8-15 Dr. Mona Hanna Attisha contacts CLPPP (K. Lishinski) regarding BLL data
- 9-9-15 Email sent from Dr. Mona Hanna Attisha to CLPPP (K. Lishinski) requesting the BLL data
- 9-11-15 DEH/DEQ conference call regarding draft communication plan; overview.
- 9-15-15 B. Scott responds to Dr. Larry Reynolds, provides chart
- 9-16-15 Dr. Mona Hanna Attisha emailed B. Scott requesting the MCIR (BLL) data
- 9-16-15 Dr. Mona Hanna Attisha contacts Senator Ananich regarding data request
- 9-22-15 Senator Ananich spoke with Director Lyon regarding Dr. Mona Hanna Attisha's data request and Flint water situation
- 9-22-15 DEQ communications office contacted DHHS communications (A. Minicucci) about Healthy Homes Program
- 9-22-15 MDHHS receives copy of Dr. Mona Hanna Attisha's presentation to be presented at upcoming press event
- 9-23-15 MDHHS WIC office receives an inquiry about availability of bottled water through the WIC program. (Per federal regulations, clients can use SNAP benefits to purchase water, but water is not an allowable food item for purchase under the WIC program).
- 9-24-15 Hurley Press Event
- 9-24-15 Director requests response to Flint water situation
- 9-24-15 Bureau of Epidemiology begins analysis of Flint zip code data utilizing the Poisson Regression for statistical analysis
- 9-25-15 MDHHS responds to Detroit Free Press reporter inquiries

- 9/28/2015 Mark Valacak-Genesee County Health Department Health Officer- contacted M. Miller regarding timeframe for completion of MDHHS data analysis
- 9-29-15 Dr. Eden Wells contacts Dr. Mona Hanna Attisha regarding her study results
- 9-30-15 Briefing to Director comparing Lead Copper Rule Testing and Marc Edwards protocol.

5 OCTOBER 2015

- 10-1-15 MDHHS provides information for Flint Water website, including the following documents: Parent Handbook: Is Your Child Safe From Lead Poisoning, Blood Lead Level (BLL) Quick Reference for Primary Care Providers, Lead Screening & Testing for Safe, Healthy Michigan Kids, and finally, Pregnant and Nursing Mothers: What You Need to Know
- 10-2-15 Governor's press conference-MDHHS study results consistent with Hurley findings
- 10-2-15 State Budget Office approval to use carryover emergency funds and transfer of DEQ funds to purchase water filters
- 10-2-15 R.Travis and S. Bien received an inquiry about what Michigan is doing regarding the Flint lead water situation from Jacqlyn Schneider, Deputy Director and Policy Director of US Senate Committee on Agriculture, Nutrition, & Forestry. Ms. Schneider inquired about the availability of Ready -to -Feed formula and asked if we are confident that the water filters that are being provided are sufficient to address the concerns about lead.
- 10-5-15 Filter distribution planning meeting held in Flint with local organizations
- 10-5-15 A teleconference was held with Rashmi Travis, Nancy Peeler, Dr. Eden Wells, Bob Scott, Corinne Miller, Sarah LyonCallo, Patti McKane (MDHSS), and Dr. Mona Hanna-Attisha, Jenny Latanz, and Dr. Richard Sandler (Hurley Lead Research Team) to discuss the nuances of the raw data that was sent on 10-2-15 to the Hurley Research Team.
- 10-5-15 S. Bien provided a response to Jaclyn Schneider indicating the following: that we are in regular contact with the local health department, the majority of WIC clients were already using bottled water to reconstitute infant formula, that a mass distribution (about 4000 filters) of filters was underway, and lead testing was being done adjunct with WIC clinics, and the local health department had additional lead testing opportunities scheduled.
- 10-5-15 MDHHS announces water filters will be available to the public on Oct. 6
- 10-6-15 MDHHS announces extended hours for filter distribution, updates Parent Handout on Flint Water website
- 10-7-15 Flint Mayor's Water Technical Advisory Committee meeting (E. Wells, L. Dykema); recommends switch back to Detroit Water Authority
- 10-8-15 GCHD issues Public Health Advisory
- 10-12-15 Daily calls with GCHD begin. Topics Include:
    - Distribution and tracking of filters
    - Development and implementation of case management in Flint by GCHD
    - Development and implementation of lead environmental inspection contract
    - Development and distribution of educational materials – to providers and parents
    - Testing events (blood lead)
    - Testing events (water mainly / DEQ activtity in the schools)
    - Data analysis (internal meeting)

- 10-13-15 MDEQ/MDHHS/toxic steering group committee meeting discusses use of the Integrated Exposure Update Biokinetic (IEUBK) model for lead in childrenfor the Flint water situation; requested a subcommittee to identify the exposure assumptions that would be developed for schools and homes
- 10-13-15 CLPPP provided Lead Week Toolkit to DEH
- 10-13-15 Began development of the Lead & Your Body infographic
- 10-13-15 MDHHS Division of Environmental Health, MDEQ, and LARA begin weekly briefing regarding school drinking water sampling
- 10-15-15 Angela Minicuci requests the addition of the MDHHS/GCHD Lead Flint Water Fact Sheet to the Flint Water website
- 10-16-15 First of weekly meetings with city of Flint meeting DEQ HHS LARA GCHD (Jim Henry) at the Mayor's office
- 10-16-15 MDHHS (L. Dykema) participates in meeting with superintendent of Flint schools
- 10-19-15 Supplemental funding legislation passed
- 10-20-15 Daily calls to GCHD changed biweekly (ongoing)
- 10-21-15 Dr. Wells and N. Peeler speak to Medicaid Health Plans (Clinical Advisory Committee meeting) regarding Blood lead testing protocol and case management follow up
- 10-22-15 Angela Minicuci requests updates to the Flint Water website of the Lead Flint Water, and Lead and Your Body documents after GCHD edits; Angela Minicuci contacted Sheryl Thompson about recording a video about how to replace a water filter in collaboration with Home Depot
- 10-23-15 DEQ's videographer, Eric Shaw, met with Home Depot employee in Flint to record his instructions about how to install and replace a filter
- 10-27-15 ETC contracted to provide EBL investigation services
- 10-27-15 Briefing to Director regarding IEUBK modeling for school drinking water screening value.
- 10-27-15 S.Bien received an email from USDA regional representative, Bruce Hillman, indicating that our Congressional Representatives had sent a letter to Tom Vilsack, Secretary of USDA inquiring about community response to address immediate and long-term needs. Regional USDA representative indicated he would be in contact with MDHHS WIC office to receive an update. MDHHS WIC office responded that we continue to work with the local health department to assure that clients are getting access to filters and bottled water to mix their infant formula. WIC also indicated that at that time there had not been any requests from WIC clients for Ready to Feed Formula.
- 10-28-15 DEH requested by Eden Wells to help clarify CLPPP report for the Director
- 10-28-15 – Brita filter replacement video was picked up by Angela Minicuci from Eric Shaw
- 10-30-15 Case management (nursing) contract with Genesee County Health Department begin
- 10-30-15 Angela Minicuci requests that the parent and provider letters, along with their attachments, be posted to the Flint Water website
- 10-30-15 (approx.) 8500 parent information packets distributed to GCHD

6 NOVEMBER 2015

- 11-3-15 Director's office received a letter from Tim English, Midwest Regional Administrator for USDA
- 11-4-15 Brita filter replacement video posted to the MDHHS YouTube channel
- 11-5-15 Response to Tim English's inquiry drafted and sent to Director Lyon's office. MDHHS indicates continued monitoring of Ready to Feed formula use and coordinating with Ready to Feed manufacturer and WIC retailers to proactively address any supply or distribution issues with infant formula availability.
- 11/6/15 Bruce Hillman, Regional Representation from USDA, notified S. Bien that they had received questions from Katie Bergh from Senator Stabenow's office regarding availability of Ready to Feed, our communication plan, how many clients had requested Ready to Feed.
- 11-6-15 Additional 3500 parent packets distributed to GCHD
- 11-9-15 Transition of 2.0 CLPPP staff to DEH
- 11-12-15 Phone conference with Karla Ruest, Rashmi Travis (MDHHS), Stan Bien (MDHSS-WIC), Kristin Hanulcik (MDHSS- WIC), Bruce Hillman (USDA), Anne Bartholomew (USDA), Katie Bergh (Senator Stabenow's office), and Jaclyn Schneider (Deputy Staff Director US Senate Committeee on Agriculture, Nurtrition, and Forestry) in regards to the legislative inquiries. Information was provided on how MDHHS is working with the local health department to monitor requests for Ready to Feed formula, continuing to work with the local health department to assure filters and bottled water are provided to clients, and providing educational materials on Ready to Feed formula to WIC clients. To date, only one WIC client had requested Ready to Feed formula.
- 11-13-15 Call with ATSDR, GCHD and MDHS to discuss outreach material
- 11/16/15 Information on Ready to Feed formula (including Talking Points, WIC Provider Letter, and infographic on Ready to Feed formula) was shared with the local health department to share with providers in the community. This same information was provided to Congressional delegates on 11-12-15 phone conference.
- 11-18-15 DHHS Meets with Governor's Flint Water Task Force
- 11-24-15 DEH Project Management Structure implemented
    - Daily Situation Reports-Reps begin being compiled and distributed to MDHHS staff
    - Bi-weekly calls with GCHD change to weekly (ongoing)
- 11-24-15 Information on Ready to Feed formula (including Talking Points, WIC Provider Letter, and infographic on Ready to Feed formula) was shared with Medicaid to share with the Medicaid Health Plans.

7 DECEMBER 2015

- 12-3-15 MDHHS BLL Summary Report released and is posted to Flint water website
- 12-7-15 Angela Minicuci requests update to the Flint Water website of the Lead and Your Body FAQ
- 12-8-15 Angela Minicuci requests removal of the Fight Lead with a Healthy Diet PDF until it's updated
- 12-11-15 MDHHS BLL Summary Report released and is posted to Flint water website

- 12-14-15 Meeting with MSA to develop specifications for production of Medicaid population based blood lead testing reports for children in Flint exposed to Flint city water source
- 12-23-15 MDHHS issues third summary EBLL report noting change in method, report posted to Flint Water website

From: Paciorek, Josh (GOV)
Sent: Tuesday, March 03, 2015 4:43 PM
To: Brownfield, Michael (GOV)
Subject: Just an FYI
Attachments: DDOSTweet.JPG

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we really should DDOS
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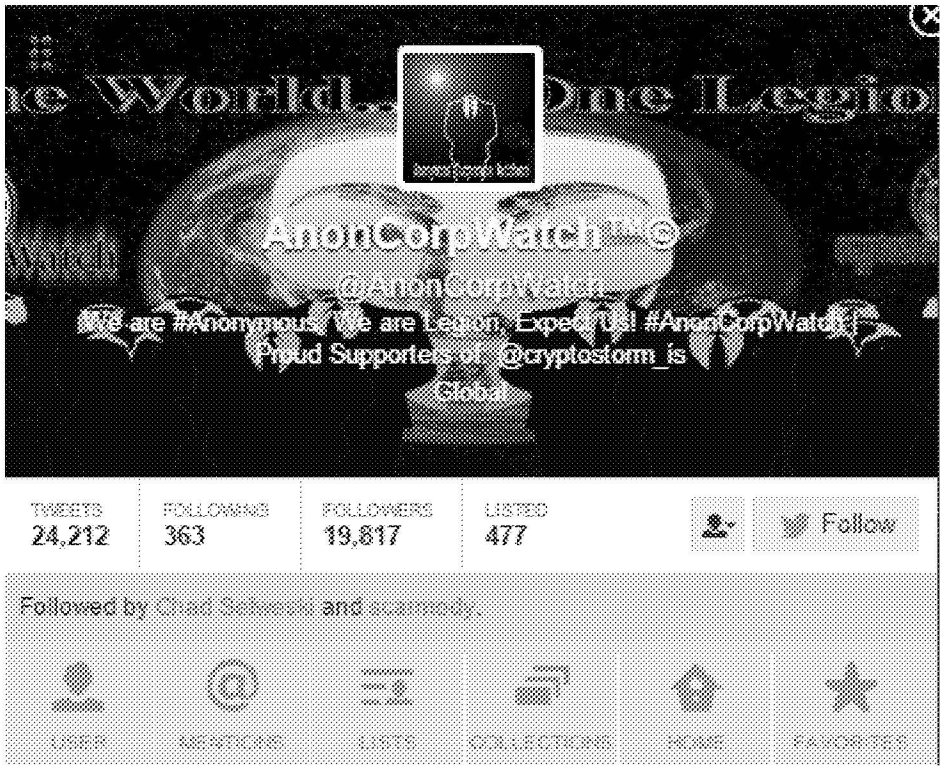
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From: Estill, John (DTMB)
Sent: Wednesday, March 04, 2015 11:32 AM
To: Brownfield, Michael (GOV)
Subject: RE: Just an FYI

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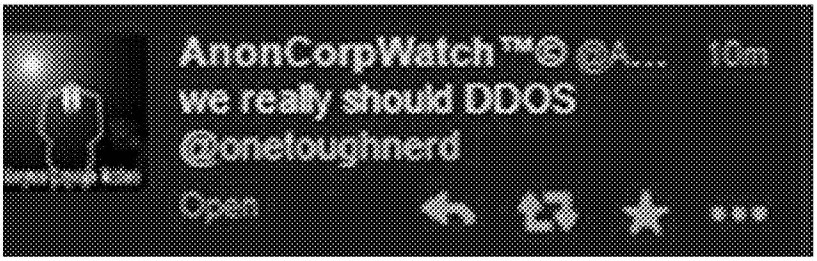

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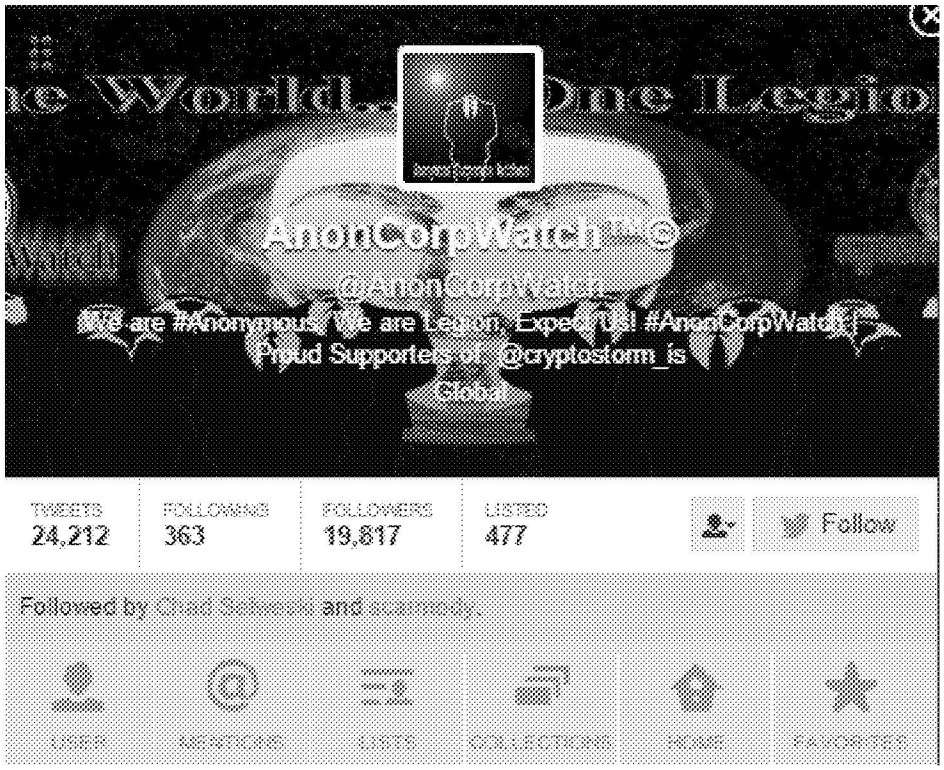
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Thanks for the heads up, these threats and attacks have become more prevalent recently. We take them very seriously.

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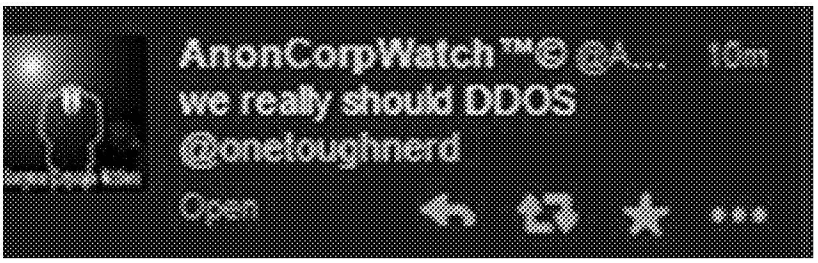
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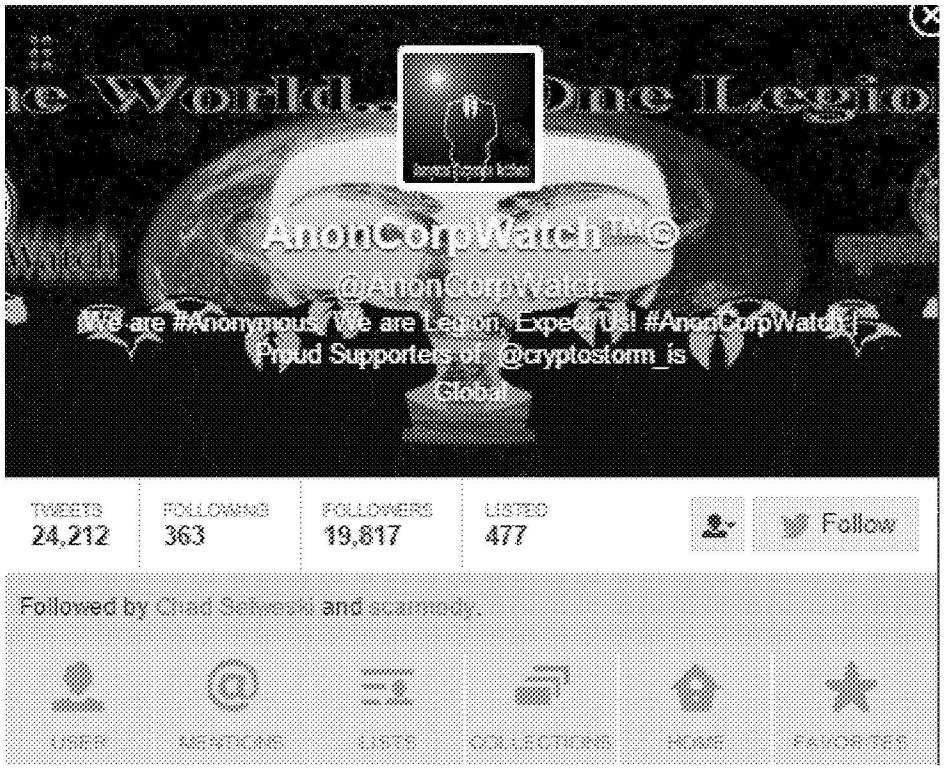
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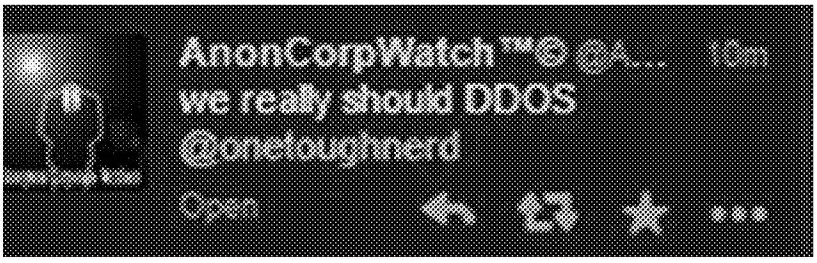

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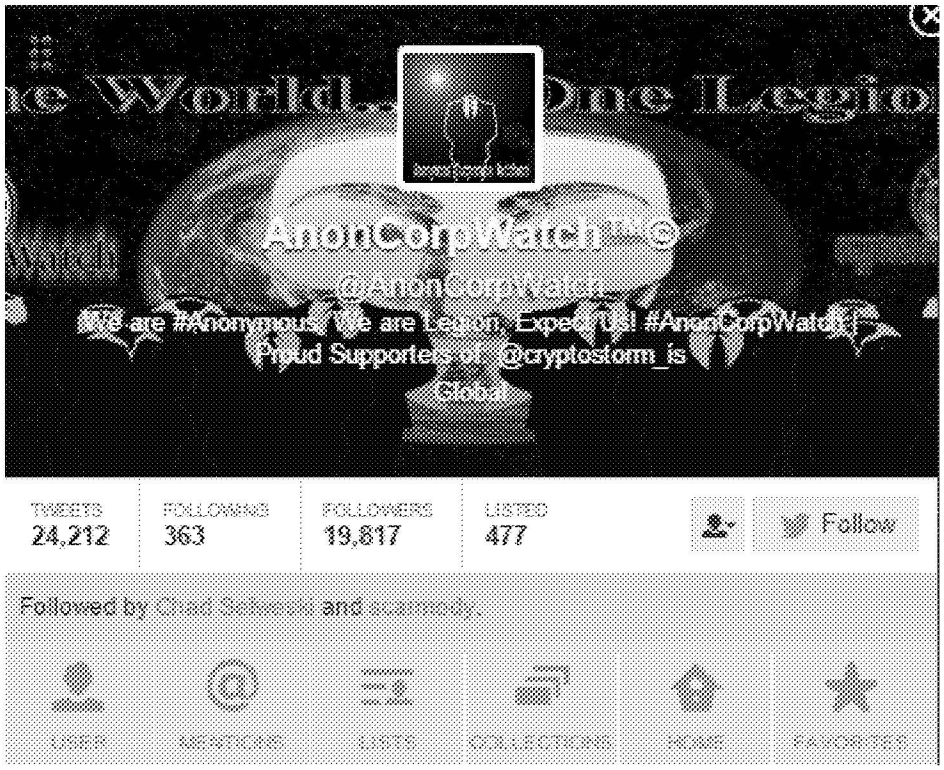
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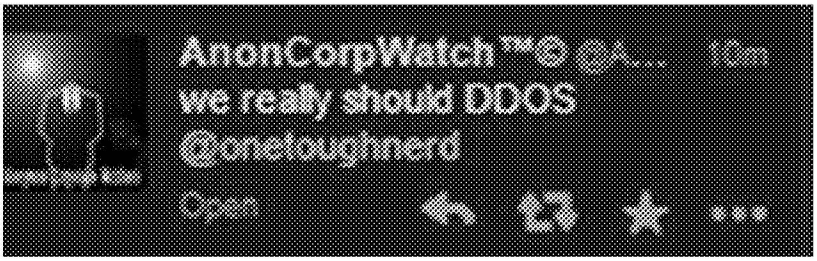

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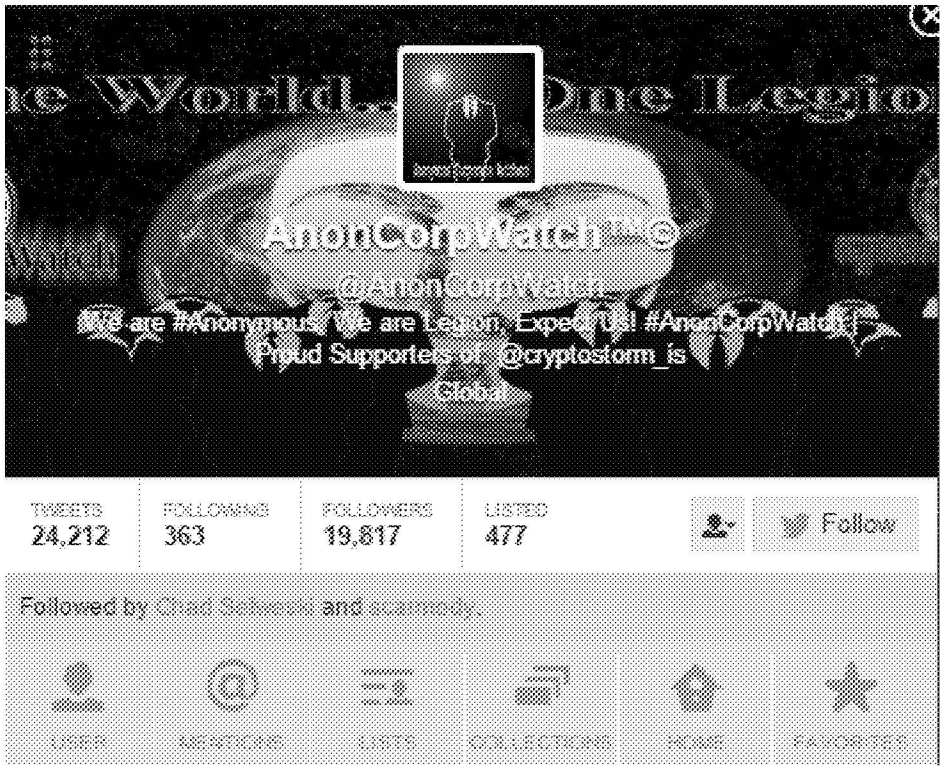
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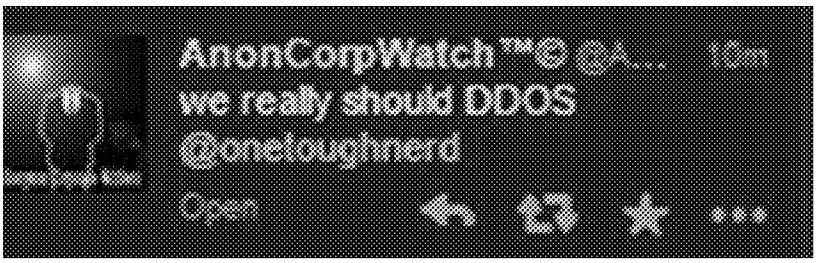
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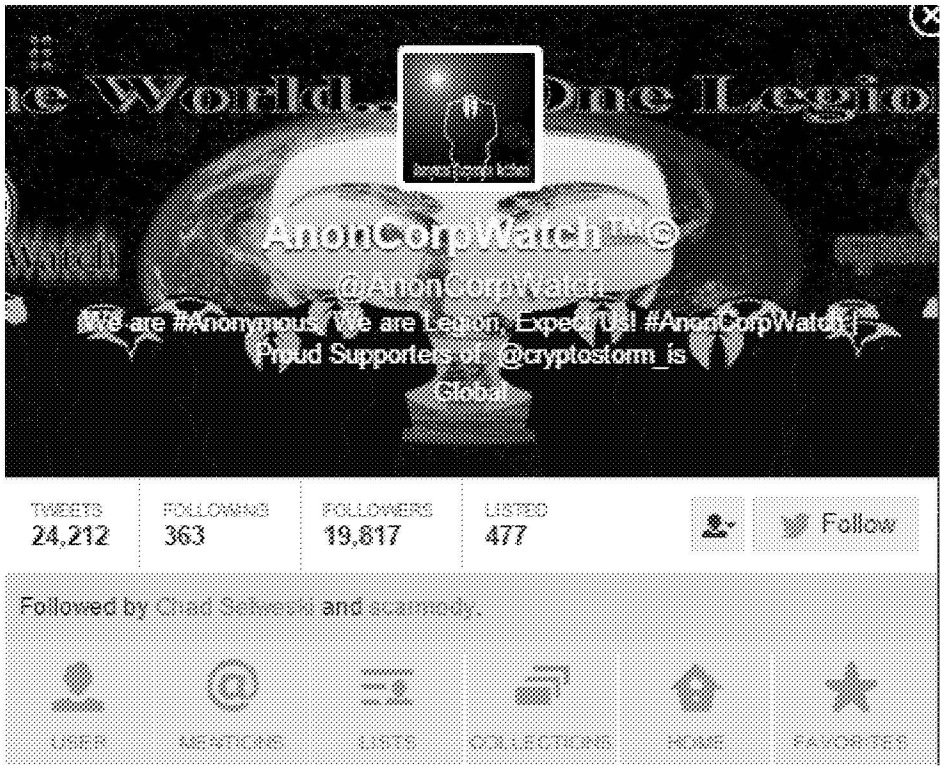
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From: Brownfield, Michael (GOV)
Sent: Tuesday, March 03, 2015 4:52 PM
To: Paciorek, Josh (GOV)
Subject: Re: Just an FYI

These are the same people who tweet at me. I'll send a note to dtmb

Sent from my iPhone

On Mar 3, 2015, at 4:42 PM, Paciorek, Josh (GOV) <Paciorekj@michigan.gov> wrote:

> Hey Mike-
>
> Just an FYI, 10 min we @AnonCorpWatch tweeted at us about a DDOS. I looked through their Twitter account, and their last few tweets have been about the Flint water situation.
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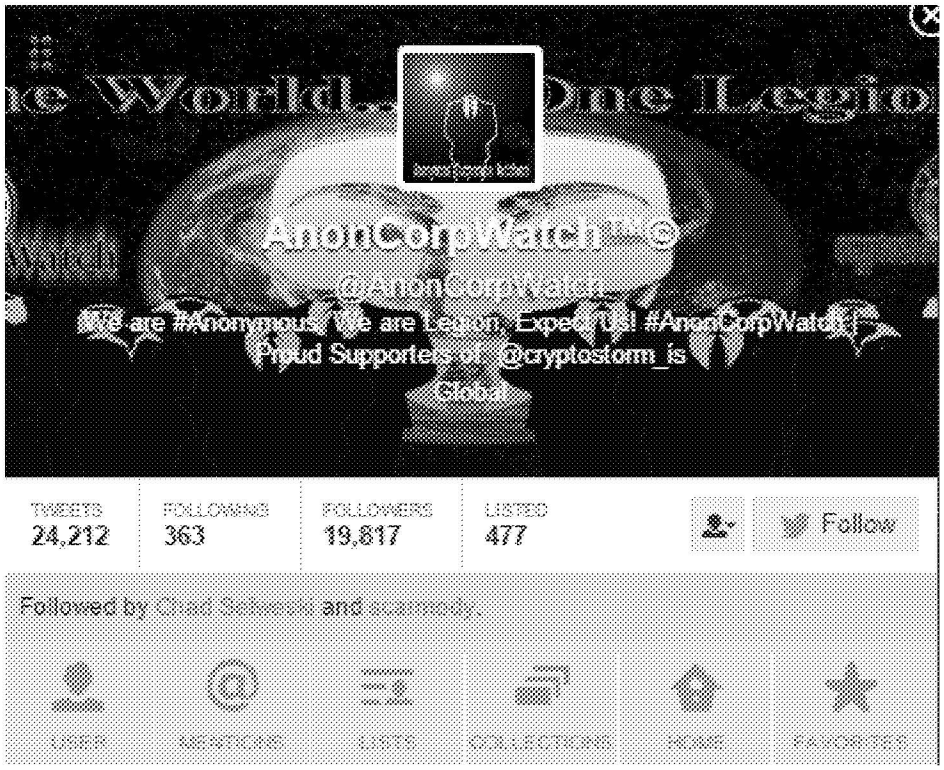
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From: Wurfel, Sara (GOV)
Sent: Thursday, October 01, 2015 6:26 PM
To: Dickinson, Sarah (GOV)
Subject: Fwd: Revised DRAFT Flint water action plan. Please review!
Attachments: ATT00001.htm; FlintWater_ActionPlan_100115.pdf; ATT00002.htm; FlintWater_Tips_100115.pdf; ATT00003.htm

Sent from my iPhone

Begin forwarded message:

From: "Paciorek, Josh (GOV)" <PaciorekJ@michigan.gov>
To: "Murray, David (GOV)" <MurrayD1@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <WurfelS@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Tommasulo, Karen (DEQ)" <TommasuloK@michigan.gov>, "Biehl, Laura (GOV)" <BiehlL@michigan.gov>, "Heaton, Anna (GOV)" <HeatonA@michigan.gov>
Subject: RE: Revised DRAFT Flint water action plan. Please review!

Attached are the most recent versions of the 1-pagers

Josh

From: Murray, David (GOV)
Sent: Thursday, October 01, 2015 6:19 PM
To: Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Tommasulo, Karen (DEQ) <TommasuloK@michigan.gov>; Paciorek, Josh (GOV) <PaciorekJ@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>
Subject: Revised DRAFT Flint water action plan. Please review!

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.
- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater. State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerate water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not used any water in hours.

If the City of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit **www.mi.gov/FlintWater** for more information

From: Paciorek, Josh (GOV)
Sent: Thursday, October 01, 2015 6:37 PM
To: Dickinson, Sarah (GOV)
Subject: RE: Revised DRAFT Flint water action plan. Please review!

That's it!

From: Dickinson, Sarah (GOV)
Sent: Thursday, October 01, 2015 6:36 PM
To: Paciorek, Josh (GOV) <Paciorekj@michigan.gov>
Subject: FW: Revised DRAFT Flint water action plan. Please review!

From: Wurfel, Sara (GOV)
Sent: Thursday, October 01, 2015 6:27 PM
To: Dickinson, Sarah (GOV) <DickinsonS@michigan.gov>
Subject: Fwd: Revised DRAFT Flint water action plan. Please review!

Ditto - but for Gov's briefing

Sent from my iPhone

Begin forwarded message:

> **From:** "Murray, David (GOV)" <MurrayD1@michigan.gov>
> **Date:** October 1, 2015 at 6:18:56 PM EDT
> **To:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <WurfelS@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Tommasulo, Karen (DEQ)" <TommasuloK@michigan.gov>, "Paciorek, Josh (GOV)" <Pacioreki@michigan.gov>, "Biehl, Laura (GOV)" <BiehlL@michigan.gov>, "Heaton, Anna (GOV)" <HeatonA@michigan.gov>
> **Subject: Revised DRAFT Flint water action plan. Please review!**

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater. State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

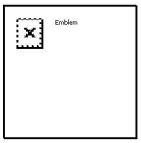
As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Dave Murray

Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray



From: Dickinson, Sarah (GOV)
Sent: Wednesday, July 01, 2015 2:48 PM
To: Clayton, Stacie (GOV)
Subject: Water Justice Journey from Detroit to Flint - #31,664 - Event Request for Governor - Review for Surrogate CRM:0057771
Attachments: 31664.pdf

Hi Stacie,

Is anyone from the U.I. team available to attend?

Thanks,
Sarah

WATER JUSTICE JOURNEY FROM DETROIT TO FLINT

31,464

June 24, 2015

Governor Rick Snyder
P.O. Box 30013
Lansing, Michigan 48909

Dear Governor Snyder:

We know there are many claims on you as governor. However, at this time, we feel compelled to write to you with an important request because of the seriousness of the water crises in Michigan. This letter comes to you with the hope that you will agree with us that every person needs safe, clean, affordable water for basic life needs that include quenching thirst, cooking meals, washing clothes, flushing toilets, and taking care of personal hygiene.

As representatives from a coalition of groups in Detroit, Highland Park, and Flint we are deeply concerned about the water crises in these cities where people are experiencing water shutoffs and water mismanagement, and in Flint where people are also experiencing water contaminants and poor water quality. These Michigan residents are being denied basic human needs and they are suffering terribly. Also, the public health is at risk with both the quality of water and the massive shutoffs, particularly for our most vulnerable folks - children, elderly and disabled. We stand together with these Michigan residents and to help remedy water crises we urge the following actions:

1. Stop water shutoffs
2. Restore water service
3. Implement an income-based water affordability plan
4. Water is a public trust - do not privatize
5. Ensure safe water

We want to give you an opportunity to hear from some residents who have experienced these water crises and we need to talk with you about our concerns and proposed actions. In this spirit we invite you to join us for a citizen's roundtable meeting with a group of representatives from the respective communities.

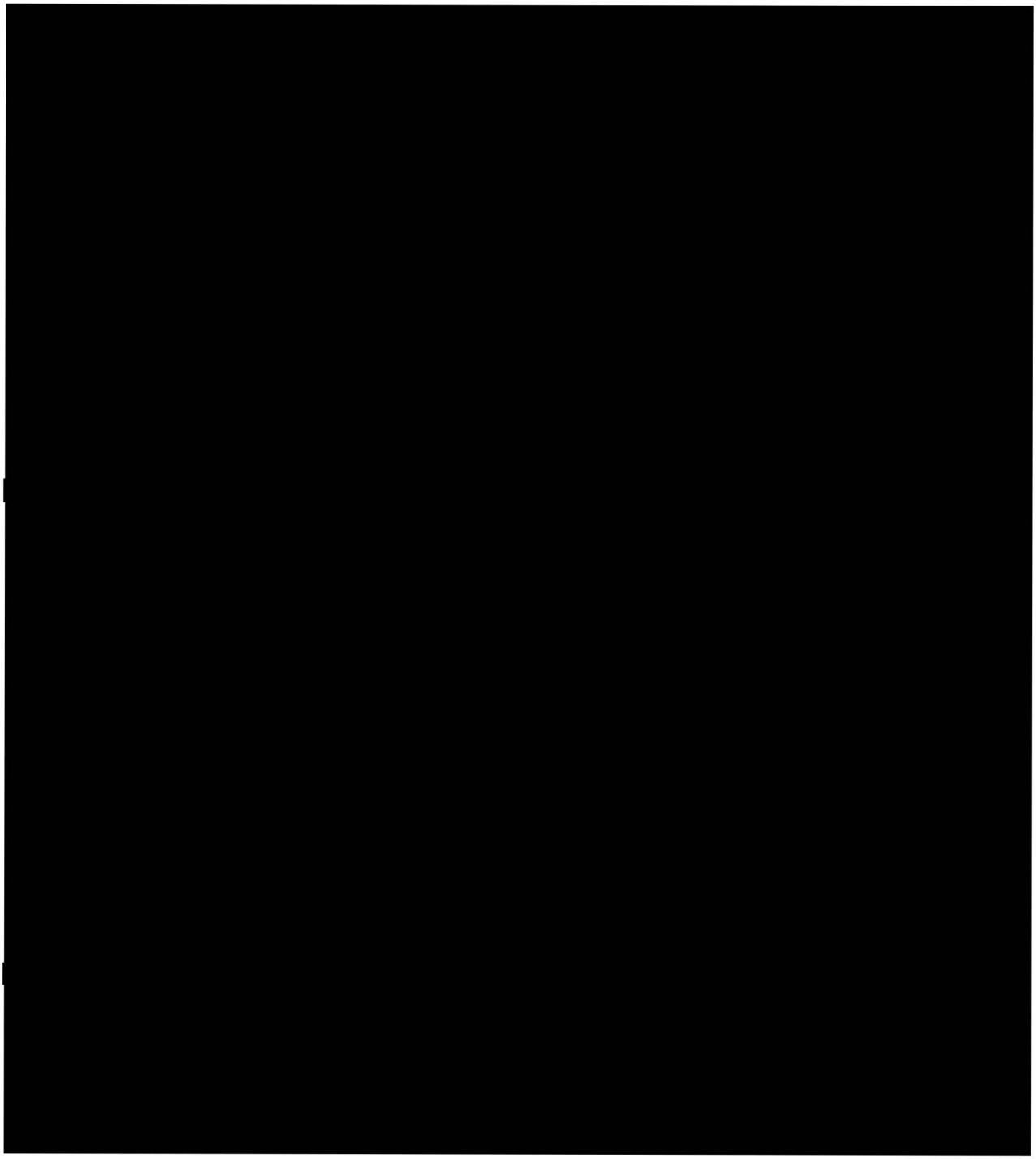
Date: July 10, 2015
Time: 10:00 AM
Place: 1101 S. Saginaw Street, Flint, Michigan 48502

We hope you are able to join us! For more information and to RSVP please contact [redacted]
phone: [redacted] email: [redacted]

Sincerely,

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Signatures continue on the next page ...



From: Dickinson, Sarah (GOV)
Sent: Wednesday, July 01, 2015 2:58 PM
To: Studley, Ryan (GOV)
Subject: Water Justice Journey from Detroit to Flint - #31,664 -Event Request for Governor Snyder - FYI CRM:0057772
Attachments: 31664.pdf

Hi Ryan,

FYI that we received this request. I'm seeing if someone from the U.I. office wants to attend, but wanted it on your radar, too.

Thanks!
Sarah

WATER JUSTICE JOURNEY FROM DETROIT TO FLINT

31,464

June 24, 2015

Governor Rick Snyder
P.O. Box 30013
Lansing, Michigan 48909

Dear Governor Snyder:

We know there are many claims on you as governor. However, at this time, we feel compelled to write to you with an important request because of the seriousness of the water crises in Michigan. This letter comes to you with the hope that you will agree with us that every person needs safe, clean, affordable water for basic life needs that include quenching thirst, cooking meals, washing clothes, flushing toilets, and taking care of personal hygiene.

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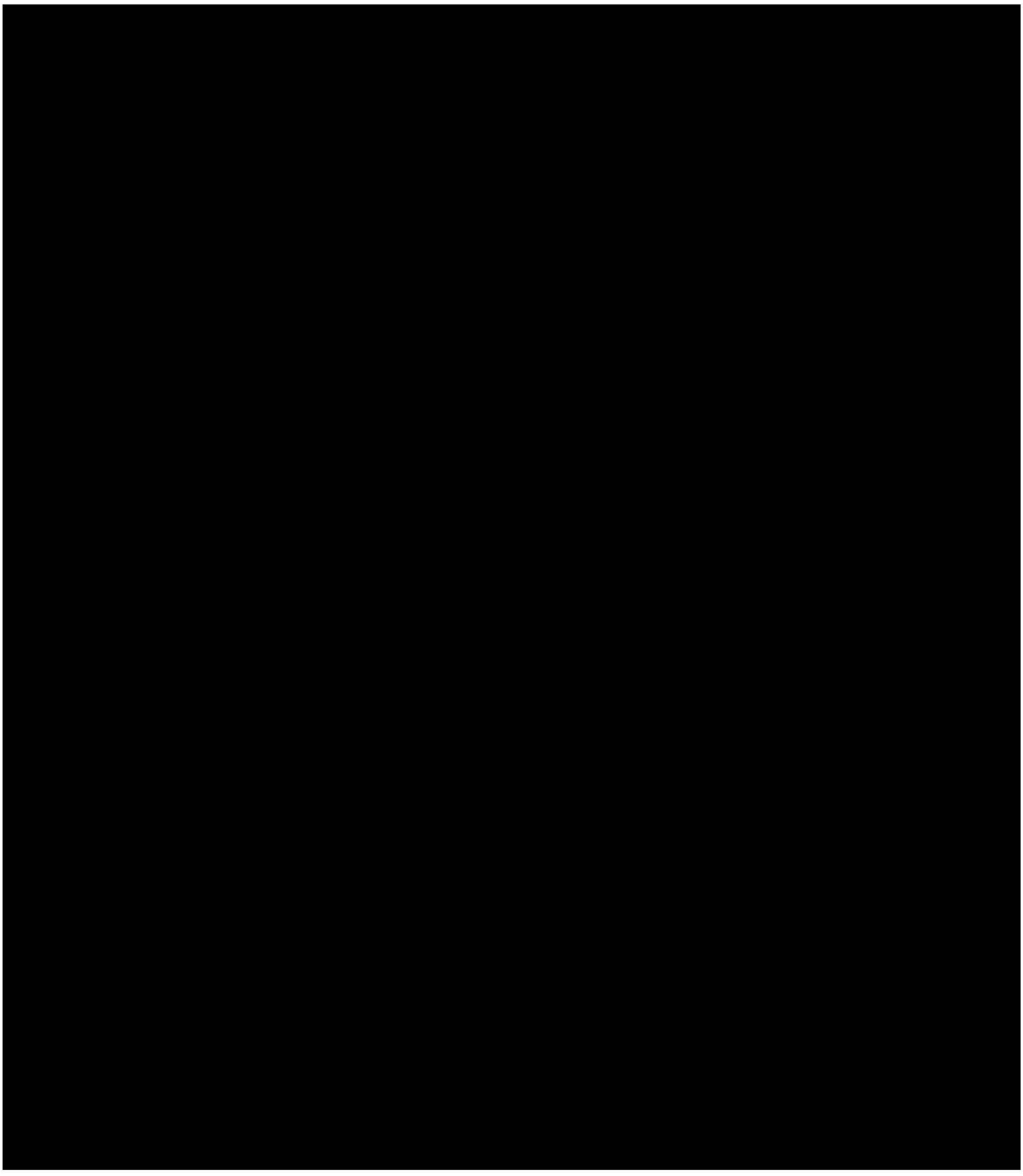
phone: [redacted] email: [redacted]

Sincerely,

[redacted]

Signatures continue on the next page ...

WATER JUSTICE JOURNEY FROM DETROIT TO FLINT



From: Dickinson, Sarah (GOV)
Sent: Tuesday, July 07, 2015 3:08 PM
To: [redacted]
Cc: Clayton, Stacie (GOV)
Subject: Decision Concerning Event Request: Water Justice Journey from Detroit to Flint - 31,664 CRM:0057792

Dear [redacted],

Thank you for the invitation for Governor Rick Snyder to attend the "Water Justice Journey from Detroit to Flint" event on July 10, 2015. We respectfully decline this invitation as the governor is unable to participate due to conflicts.

Sincerely,

Sarah Dickinson
Scheduling Office
govscheduling@michigan.gov

From: Murray, David (GOV)
Sent: Thursday, January 22, 2015 9:35 PM
To: Agen, Jarrod (GOV); Silfven, Ken (GOV); Biehl, Laura (GOV); Wurfel, Sara (GOV); Paciorek, Josh (GOV); Rexford, Tori (GOV)
Subject: Flint water talking points and background
Attachments: Adressing Flint's Water Concerns final.docx; Flint Water TPs.docx

Good evening team,

Terry Stanton, working with Brad and Jerry Ambrose, drafted talking points and background on the Flint water issues.

If asked, Terry suggests the governor say:

Residents deserve clean, safe water and EM Jerry Ambrose, his management team and the DEQ are working to ensure that…and that the State will be a resource where and when possible, as we have with other issues, such as public safety.

Terry said he cannot speak to other "requests" in the Mayor's letter (dated 1-18), which seek waivers, Federal and State funding, etc. He said the city is committed to addressing the issue and in fact, has taken numerous steps (with guidance and/or approval from DEQ) to date.

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

Addressing Flint's Water Concerns

Recent events have raised concerns among many as to the safety and quality of the water provided by the City's utility system. The City is and continues to be committed to assuring that residents and visitors know that the water is safe and that those responsible for providing water are working every day to improve the quality of the water. The quality of the water does need improvement, but that is not to be confused with safety of the water. The recent notice by MDEQ clearly stated that the water provided by the utility system is safe to drink, but cautioned that some vulnerable groups may want to consult with their health care provider if they have concerns. The City remains committed to their efforts to assure that the water is safe for everyone and that quality is improved.

To date, the City has taken the following actions:

- As an integral part of the transition to the Flint River on a temporary basis, the MDEQ was consulted about the City's plans, and ultimately issued necessary permits to proceed. The City also engaged the services of the LAN engineering firm to guide the city in installing the necessary equipment to treat the water on an ongoing basis. This resulted in the development of a comprehensive drinking water plan.

- The City monitors its water quality on a daily basis to assure that water quality remains within established guidelines. With the variances in water temperature and the leakage and infiltration problems arising as the result of failure of parts of the distribution system, water quality did exceed, for a time some of the established guidelines. This resulted in the issuance of the recent notices to the public. Upon receipt of information that some guidelines were exceeded, the City's priority focus was to bring water quality back within guidelines. Efforts taken to address non-compliance included increasing water flow through valve replacements and hydrant flushing and optimizing treatment processes.

- The City has committed to increasing communication with the public in order to inform water users factually of the issues which have arisen, to alleviate unnecessary concern, to identify the steps being taken to address the issues. This is being implemented through detailed and easy to understand educational materials being made available both online and at City Hall, as well as through ongoing public informational meetings.

- Most recently, in light of recent concerns raised by resident groups over the quality and safety of water, Department of Public Works Director Howard Croft and his staff collected questions from citizens during a recent public meeting. After reviewing these questions, DPW Director Croft and his staff set out to answer them in concise detail; the result of that work is a full Water System Questions and Answers document which has been made available online. Along with the detailed information within, the document also contains links to other source documents and regulatory statutes found online which were used as reference. "We want the residents, businesses and visitors of Flint to know that the water in Flint is safe and that we are working every day to make improvements to our system to ensure that," said Croft. "Our goal is make sure we get people the

information on our efforts and assure them that we are on the right track with them." More documentation, including regular water quality monitoring reports, will be made available as they become ready for distribution.

- Additionally, a number of public meetings have and will continue to take place. Two of the most recent of these took place at the Antioch Baptist Church and the Mott Community College Regional Technology Center. These meetings were held by concerned neighborhood groups and were attended by Mayor Walling and DPW Director Croft. At both meetings, citizens voiced their concerns and asked questions about water quality and the recent violation notice. Director Croft offered detailed answers to common questions, but also offered to investigate specific water issues raised by residents in which the City could offer assistance. Those in attendance came away with a better understanding of the issues surrounding the drinking water in their community.

- The City of Flint will be hosting a water presentation on Wednesday, January 21, 2015 at 7pm. That presentation will held in the City Hall Dome and will feature information detailing water treatment, water distribution and the steps being taken to ensure that citizens get water that meets all regulatory safety and quality standards. City DPW officials Howard Croft and Daugherty Johnson, Utilities Administrator, will be joined on a panel by representatives from the Genesee County Drain Commissioner's office, the Michigan Department of Environmental Quality and LAN engineering. Written questions from the audience will be collected during the presentation and answered by the panel after the presentation.

- The City of Flint has also determined that in light of the serious concerns raised, it will secure the services of an external firm with expertise in managing drinking water quality to assess the steps that the city has taken, to make recommendations as to other steps to be taken, to oversee their implementation, and to monitor operations until the City's water source becomes the KWA.. A Request for Proposal was issued on January 15, 2015, with proposals due back on January 26.

The DWSD Question:

As a result of the concerns raised, several community members have suggested that the City reconnect to the Detroit Water and Sewer Department (DWSD). DWSD has advised that they would be willing to allow such a reconnection without a hook-up fee. However, the City would be obligated to pay a fixed monthly charge of $846,700 plus the $14.92/Mcf cost of water itself. The City's analysis of the DWSD proposal concludes that the City's cost would increase by more than $12 million per year at the proposed rates, and could increase even more as proposed rates are subject to change after July 1, 2015. This increase in costs would not be in the best interests of the City or its water users, as the City is committed to assuring safety and improving water quality by following its current plan, and reconnecting to DWSD would likely require deferment of existing capital improvements or an additional increase in rates.

Talking Points:

The City, in conjunction with the Dept. of Environmental Quality, is working diligently…every day…to ensure Flint residents have access to clean, safe water. To that end, the City has issued an RFP soliciting expert assistance to assure the City is doing everything it needs to be doing.

The city continues to work closely with staff from the Department of Environmental Quality (DEQ) to ensure water meets safety guidelines, that water operations are managed properly, and all regulations are met.

The city is committed to addressing the issue and continues to pursue its strategy.

Background:

On December 16, 2014, the City of Flint received a violation notice from the Michigan Department of Environmental Quality (DEQ), stating the City water samples were in violation of Maximum Contaminant Levels (MCL), a violation of the Safe Drinking Water Act (PA 399 of 1976).

The DEQ considers the violation period to have begun December 1, 2014. The violation was triggered when water sample reports showed that the City's water quality, on average, exceed the total allowable level of *Disinfection Byproducts* during the first three quarters of 2014. Further, four of the City's eight water sample site locations individually exceeded allowable MCL levels during the same period of 2014.

These conditions are considered a Tier 2 violation and, as a result, the City was required to notify the public of these contamination levels by January 10, 2015 (which was done) and continue to notify them every three months until the violation is resolved.

The City outlined some potential remedies to the problem in its initial Operational Evaluation Report, dated November 26, 2014. These potential remedies are intended to be implemented in stages. Stage 1 consists of actions that can be implemented without any new construction within the distribution system and are due to be implemented by early March 2015.

- Troubleshooting of the ozone system.
- Implementation of different testing methods.
- Operational changes at the Water Treatment Plant.
- Increase water main flushing efforts to minimize stagnant water.
- Identify areas with high water age and implement preemptive measures.

The City will be providing additional potential solutions when it updates the Operational Evaluation Report, which must be submitted to the DEQ by March 1, 2015.

To date, the City has taken the following actions:

As an integral part of the transition to the Flint River on a temporary basis, the MDEQ was consulted about the City's plans, and ultimately issued necessary permits to proceed. The City also engaged the services of the LAN engineering firm to guide the city in installing the necessary equipment to treat the water on an ongoing basis. This resulted in the development of a comprehensive drinking water plan.

The City monitors its water quality on a daily basis to assure that water quality remains within established guidelines. With the variances in water temperature and the leakage and infiltration problems arising as the result of failure of parts of the distribution system, water quality did exceed, for a time, some of the established guidelines. This resulted in the issuance of the recent notices to the public.

Efforts taken to address non-compliance included increasing water flow through valve replacements and hydrant flushing and optimizing treatment processes.

The City has committed to increasing communication with the public in order to inform water users factually of the issues which have arisen, to alleviate unnecessary concern and to identify steps being taken to address the issues. This is being implemented through detailed educational materials being made available both online and at City Hall, as well as through public informational meetings. Additionally, a full Water System Questions and Answers document is available online.

Additional information:

State and city officials have said exposure to TTHM is a long-term concern for some if they drink water with elevated TTHM for several decades.

Notices indicated that Flint water is safe to drink but warns those with a "severely compromised immune systems or who are elderly" may be at increased risk and should seek advice about drinking water from your health care provider.

The city and county are partners in the Karegnondi Water Authority, which is building a pipeline to Lake Huron to bring lake water here for use by the end of 2016.

Returning to DWSD would add approximately $1 million (monthly) to the City expenses.

From: Paciorek, Josh (GOV)
Sent: Monday, January 26, 2015 9:16 AM
To: Agen, Jarrod (GOV); Wurfel, Sara (GOV); Biehl, Laura (GOV); Brown, Jessica (GOV); Rexford, Tori (GOV); Murray, David (GOV); Silfven, Ken (GOV)
Subject: RE: Hit Time and Focus for Today's 11a b
Attachments: Adressing Flint's Water Concerns final.docx; Flint Water TPs.docx; PR.150116.SameSex.docx

Hi team,

Here are the talking points regarding Flint water, the doc addressing Flint' Water Concerns, and the Gov's statement on the Supreme Court/Same-sex.

I don't think the Gov has said anything public regarding Flint water, but I doubled check and still didn't find any articles, quotes, etc. There was this article about Mayor Walling's letter to the gov regarding Flint water: http://www.mlive.com/news/flint/index.ssf/2015/01/flint_mayor_asks_governor_for.html

Josh

From: Agen, Jarrod (GOV)
Sent: Monday, January 26, 2015 8:52 AM
To: Wurfel, Sara (GOV); Biehl, Laura (GOV); Brown, Jessica (GOV); Paciorek, Josh (GOV); Rexford, Tori (GOV); Murray, David (GOV); Silfven, Ken (GOV)
Subject: RE: Hit Time and Focus for Today's 11a b

I've asked Josh to pull Gov's statement on Supreme Court/Same-Sex to refresh Gov.
Also – we'll need anything state has said on Flint water (if anything).

From: Wurfel, Sara (GOV)
Sent: Monday, January 26, 2015 8:50 AM
To: Agen, Jarrod (GOV); Biehl, Laura (GOV); Brown, Jessica (GOV); Paciorek, Josh (GOV); Rexford, Tori (GOV); Murray, David (GOV); Silfven, Ken (GOV)
Subject: FW: Hit Time and Focus for Today's 11a b
Importance: High

FYI

From: Malzberg, Marie [mailto:Marie.Malzberg@turner.com]
Sent: Monday, January 26, 2015 8:46 AM
To: Wurfel, Sara (GOV)
Subject: Hit Time and Focus for Today's 11a b
Importance: High

Good Morning Sara!

As of now, we have Governor Snyder hitting with John Berman and Kate Bolduan at about 11:20a ET. The FOX studio is good to go!

Thanks again!
Marie

MARIE MALZBERG
CNN SR. EDITORIAL PRODUCER
212-275-8261
917-751-5728
MARIEMALZBERG@TURNER.COM
@MARIECNN

Talking Points:

The City, in conjunction with the Dept. of Environmental Quality, is working diligently…every day…to ensure Flint residents have access to clean, safe water. To that end, the City has issued an RFP soliciting expert assistance to assure the City is doing everything it needs to be doing.

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The City monitors its water quality on a daily basis to assure that water quality remains within established guidelines. With the variances in water temperature and the leakage and infiltration problems arising as the result of failure of parts of the distribution system, water quality did exceed, for a time, some of the established guidelines. This resulted in the issuance of the recent notices to the public.

Efforts taken to address non-compliance included increasing water flow through valve replacements and hydrant flushing and optimizing treatment processes.

The City has committed to increasing communication with the public in order to inform water users factually of the issues which have arisen, to alleviate unnecessary concern and to identify steps being taken to address the issues. This is being implemented through detailed educational materials being made available both online and at City Hall, as well as through public informational meetings. Additionally, a full Water System Questions and Answers document is available online.

Additional information:

State and city officials have said exposure to TTHM is a long-term concern for some if they drink water with elevated TTHM for several decades.

Notices indicated that Flint water is safe to drink but warns those with a "severely compromised immune systems or who are elderly" may be at increased risk and should seek advice about drinking water from your health care provider.

The city and county are partners in the Karegnondi Water Authority, which is building a pipeline to Lake Huron to bring lake water here for use by the end of 2016.

Returning to DWSD would add approximately $1 million (monthly) to the City expenses.

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:07 AM
To: Agen, Jarrod (GOV); Wurfel, Sara (GOV); Brown, Jessica (GOV); Biehl, Laura (GOV); Paciorek, Josh (GOV); Rexford, Tori (GOV)
Subject: Possible final version of Flint water grant release
Attachments: 3 RELEASE Flint water grants TS.docx

Team,

Here's the latest version of the Flint water grant release. This includes edits from Treasury, a quote from Mayor Walling and the deletion of Rep. Phelps, who cannot attend.

The event starts at 3 p.m.

Thank you!

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray, Governor's Office 517-335-6397 Terry Stanton, Department of Treasury 517-335-2167	<< AUTODATE >>

Gov. Rick Snyder awards Flint $2 million in 'distressed municipalities' grants for water system infrastructure improvements

Funding to be used for leak detection, waste incinerator replacement

LANSING, Mich. – Gov. Rick Snyder today awarded Flint $2 million in grants for water system infrastructure improvements, part of an overall $8 million plan to help municipalities through the Financially Distressed Cities, Villages, and Townships Grant Program.

Flint is among eleven municipalities receiving grants through the program. The city will use the funding to detect leaks in its water lines and replace its Water Pollution Control Facility Incinerator.

"There are opportunities for state government to assist Flint city leaders as they address issues related to the city's water system," Snyder said. "These grants will help recovering cities improve public services and infrastructure, improving the quality of life for all residents."

The grants to Flint were announced today at the Haskell Community Center by Harvey Hollins, director of the state's Office of Urban Initiatives, and Wayne Workman, the state's deputy treasurer. They were joined by Dan Wyant, director of the Michigan Department of Environmental Quality, Flint Emergency Manager Jerry Ambrose, Mayor Dayne Walling, state Senate Minority Leader Jim Ananich, state Rep. Sheldon Neeley.

Flint was awarded $900,000 to allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity, allowing the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

The city also was awarded $1.1 million to shut down its current Water Pollution Control Facility incinerator and replace it with new facilities which will allow for the disposal of waste in landfills. The existing facilities are not up to federal Environmental Protection Agency standards.

Flint Mayor Dayne Walling said he appreciates the state support.

"This announcement comes at the perfect time for Flint as we continue with repairs and upgrades to our water service infrastructure that are in accordance with our new Capital Improvement Plan," Walling said. "This significant funding opportunity from the State will allow us to move forward with two projects that will mean long term cost savings for the City of Flint."

Municipalities are eligible for the grants if they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

##

From: Wurfel, Sara (GOV)
Sent: Monday, March 16, 2015 1:38 PM
To: Biehl, Laura (GOV); Agen, Jarrod (GOV)
Cc: Murray, David (GOV); Rexford, Tori (GOV)
Subject: RE: comms update

If we could add guns and faith-based adoption in as topics to quickly cover, that'd be great. Beth C is particularly concerned about the latter. Flint water continues to be a relatively big deal with Harvey working on several things that could be big deals. Might be good to bring up with him too.

Also, for the quick overview listed first in the top section of roads, we're missing WWJ/CBS radio for Friday.

We'll be working with Beth E to find phone time for the ones he agreed to last week (Ann Arbor Observer, Rochelle Riley, Tom Walsh) – though if you feel we're already good and covered with him, great.

From: Biehl, Laura (GOV)
Sent: Monday, March 16, 2015 1:29 PM
To: Agen, Jarrod (GOV)
Cc: Wurfel, Sara (GOV); Murray, David (GOV); Rexford, Tori (GOV)
Subject: Re: comms update

Looks good to me!

Laura Biehl
Communications Manager
Gov. Rick Snyder and Lt. Gov. Brian Calley
biehll@michigan.gov
office: 517-335-6397

On Mar 16, 2015, at 1:27 PM, Agen, Jarrod (GOV) <AgenJ@michigan.gov> wrote:

> Please add anything missing.
> Laura – are my interviews correct? Change as needed.
>
> <Gov Comms Update 3-16-15.docx>

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 2:02 PM
To: Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Re: Flint Head Start told to not use city of Flint water?

Bob, if that went out on Jn. 29, that's what he's referring to. Do you have a response if I refer him to you?

Also, can you send me a copy of that, because I'm certain we'll get questions today.

It's a bit concerning that such a notice went out and we didn't get a heads-up.

Dave

Sent from my iPad

On Feb 3, 2015, at 12:07 PM, Wheaton, Bob (DHS) <WheatonB@michigan.gov> wrote:

> Everyone,
>
> Attached is a DHS Bureau of Children and Adult Licensing GovDelivery email that went out to subscribers of the BCAL newsletter. It doesn't prohibit child care centers from using Flint water, but suggests that they seek medical advice or use bottled water. So maybe that's what the intermediate school district is talking about regarding the Head Start program.
>
> It's possible MDE could have issued something as well, so I'll check with them.
>
> Bob
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Tuesday, February 03, 2015 11:22 AM
> **To:** Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?
>
> I asked Ron to go back to the GISD for some specific information about the recommendation, asking for specific department names and people.
>
> We'll get to the bottom of this.
>
> ---
>
> **From:** Smith, Jennifer (DCH)
> **Sent:** Tuesday, February 03, 2015 11:19 AM
> **To:** Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?
>
> Not on our end, I think we covered it last week! I was just curious so I could be ready for calls.
>
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> **From:** Murray, David (GOV)
> **Sent:** Tuesday, February 03, 2015 11:15 AM
> **To:** Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?

Our event is 3 p.m. today. Is there anything that might be important for us to know in advance?

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:10 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Hi Dave – is there an event still planned for this week?

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:08 AM
To: Minicuci, Angela (DCH); Wheaton, Bob (DHS); Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

This is news to me. Let me check with Ron for some details.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

Hi Jen, Angela,

Ron Fonger from The Flint Journal left me a message stating that DHS told the Genesee Area Intermediate School District told the Head Start program not to use city of Flint water.

Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is 810-347-9963.

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287

[redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Wurfel, Sara (GOV)
Sent: Tuesday, February 03, 2015 4:37 PM
To: Agen, Jarrod (GOV)
Subject: FW: Flint Head Start told to not use city of Flint water?

FYI. Sigh. We're working on this now too.

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 2:02 PM
To: Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Re: Flint Head Start told to not use city of Flint water?

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To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
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Subject: RE: Flint Head Start told to not use city of Flint water?

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To: Minicuci, Angela (DCH); Wheaton, Bob (DHS); Smith, Jennifer (DCH)
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Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

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Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

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Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is 810-347-9963.

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
[redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Murray, David (GOV)
Sent: Friday, February 06, 2015 3:26 PM
To: Agen, Jarrod (GOV); Wurfel, Sara (GOV)
Subject: FW: Flint Water

I have concerns about this.

http://www.veolianorthamerica.com/en

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Dave & Harvey: We are working with Veolia North America, the water consulting team Flint has hired to "assess the situation." We're planning to hold a media roundtable with city officials on Tuesday to introduce the Veolia team to local reporters. Gerry Ambrose suggested we invite some of the folks you invited to attend the newser earlier this week. Is that a list you can share with me or would it be better for the invite to come from you or the EM directly? I don't have a specific time yet but can provide that information for you when it is available. What do you think?

Kelly

PS I forgot to say thanks!!!!

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download of this picture from the Internet. https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.png

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

[redacted]
Office: (517) 487-9320
Fax: (517) 487-5080

From: Muchmore, Dennis (GOV)
Sent: Monday, March 02, 2015 11:57 PM
To: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Fwd: Contaminated Drink Water if Flint
Attachments: CCF02282015_0002.pdf; ATT00001.htm

Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.

How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.

If we procrastinate much longer in doing something direct we'll have real trouble.

Sent from my iPhone

Begin forwarded message:

> **From:** Kelly Rossman-McKinney <krossman@truscottrossman.com>
> **Date:** March 2, 2015 at 8:26:34 AM EST
> **To:** Dennis Muchmore <muchmored@michigan.gov>
> **Subject: FW: Contaminated Drink Water if Flint**
>
> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download of this picture from the Internet.
https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.png

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

[redacted]
Office: (517) 487-9320
Fax: (517) 487-5080

> **From:** Gerald Ambrose [mailto:gambrose@cityofflint.com]
> **Sent:** Monday, March 02, 2015 7:36 AM
> **To:** Kelly Rossman-McKinney
> **Subject:** Fwd: Contaminated Drink Water if Flint

Welcome to Monday. Please advise asap as to any next steps you recommend, if any.

---------- Forwarded message ----------
From: "Dayne Walling" <dwalling@cityofflint.com>
Date: Mar 2, 2015 7:29 AM
Subject: Fwd: Contaminated Drink Water if Flint
To: "Gerald Ambrose" <gambrose@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, "Peter Bade" <pbade@cityofflint.com>
Cc:

FYI:
---------- Forwarded message ----------
From: [redacted]
Date: Sat, Feb 28, 2015 at 2:09 PM
Subject: Contaminated Drink Water if Flint
To: [redacted]
Cc: "mail103@foxtv.com" <mail103@foxtv.com>, WFLT 1420 Am <wflt1420am@aol.com>, Abc12news <abc12news@abc12.com>, Wnem Desk <wnem@wnem.com>, Scot Johnson Wnem <scot.johnson@wnem.com>, "news@wjr.com" <news@wjr.com>, [redacted] Eric Mays <emays@cityofflint.com>, Emergency Manager <em@cityofflint.com>, [redacted] Vicky Van Buren <vvanburen@cityofflint.com>, Jackie Poplar <jpoplar@cityofflint.com>, [redacted] <wdavis@cityofflint.com>, [redacted] "hwinford@cityofflint.com" <hwinford@cityofflint.com>, Inez Brown <ibrown@cityofflint.com>, Peter Bade <pbade@cityofflint.com>, "knelson@cityofflint.com" <knelson@cityofflint.com>, [redacted] Scott Kincaid <skincaid@cityofflint.com>, [redacted] Dyane Walling <dwalling@cityofflint.com>, [redacted]

Good Afternoon, Attorney Randall!

Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!

We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!

I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.

The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluoride/ej.html regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.

Thank you very much in advance!!

I remain.

[redacted] Concerned Resident

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

Flint is largest water system in Michigan with highest TTHM problem, records show

Ron Fonger | rfonger1@mlive.com by Ron Fonger | rfonger1@mlive.com
on February 27, 2015 at 9:30 AM, updated February 27, 2015 at 1:22 PM

FLINT, MI -- When a consultant told Flint officials that they weren't alone in trying to get trihalomethanes out of a public water supply, he wasn't kidding.

But the consultant left something else out -- almost all communities with the same problem in Michigan were able to fix it before regulators cited them for violation of the federal Safe Drinking Water Act.

Flint's violation of the federal standards for excess total trihalomethanes (TTHM) -- which occur as a byproduct of disinfecting Flint River water for public consumption -- was just the fifth in the state since 2010, according to state records requested by MLive-The Flint Journal.

RELATED: **12 critical facts about TTHM, the stubborn Flint water contaminant**

Since then, public outrage has grown as the city of Flint, with the help of experts, struggles to rein in its contaminant levels while continuing to charge the highest water rates in Genesee County. Flint switched to using the Flint River as its water source in 2014.

Recent tests have shown that TTHM levels are within federal guidelines, and the city and its hired consultant -- Veolia North America -- say the water is safe to drink.

But Flint remains in violation of the Safe Drinking Water Act because previous levels of the disinfection byproduct were so high in 2014, triggering an ongoing violation.

The questionable quality of Flint water has frustrated residents such as Betty Jones, who said her water bill rise even when she uses less water because of her concerns over its quality.

"All we are doing is paying, paying paying (and you) can't drink it. You can't even take a bath in it," Jones said this week.

Persistent TTHM problems are rare in Michigan. Flint is among only three water supplies -- out of a total of 623 in the state -- that have had TTHM issues that lingered long enough to result in federal water quality violations.

The city's running average at one sampling site on Flushing Road was also the highest in the state in at least five years, state records show.

TTHM is an odorless, colorless contaminant, created when the organic material in water like leaves or dirt come into contact with a disinfectant like chlorine.

Although city, state and federal agencies warn that drinking water containing TTHM in excess of 80 parts per billion over many years may cause liver, kidney or central nervous system problems, the health risk is generally considered low and tied to continued exposure over decades.

U.S. EPA says it regulates disinfection byproducts such as TTHM "to address health risks posed by a potential association between chlorinated drinking water and cancer, particularly bladder cancer."

Bob Bowcock, a water expert who works with environmentalist Erin Brockovich, said most people shouldn't worry about drinking water with high levels of TTHM for a short period of time, but said there are reasons for concern.

"Am I worried (about drinking it) as a 50-year-old man? I'm not worried about that," Bowcock said. "What concerns me is airborne contamination, particularly for women in their third trimester" of pregnancy such as when taking a shower and mist of contaminated water is breathed in, he said.

Veolia Vice President Rob Nicholas, who last week declared Flint's water to be safe based on data from recent voluntary tests, also has called the TTHM violation "an unfortunate problem (that) you want to get ... fixed as soon as you can."

State records show most communities over the last five years have been able to do that even though more than 105 individual test results from 52 surface water supplies have tested at higher than the 80 parts per billion limit spelled out in the law.

Problems were even more frequent in Flint and for four other surface water systems, supplied by two water sources. Each of those systems had TTHM problems stubborn enough that testing sites maintained a running annual average above the limit.

The same records show:

- In addition to Flint, the Beaver Road Area Water Association, Beaver Township water system, Portsmouth Township water system, and Buena Vista Township water system have been cited for lingering TTHM problems. Nearly 99.5 percent of state water systems have not been cited for TTHM levels since 2010.

- Beaver Road Area Water Association, Beaver and Portsmouth townships are supplied by the Bay City water system through an arrangement with Bay County. Buena Vista Township, which is no longer in violation, is supplied by the city of Saginaw, which is part of the Saginaw-Midland Municipal Water Supply

Cont.

* With more than 31,000 customers, Flint is easily the largest water system in Michigan with a TTHM violation in recent years. The other communities with violations since 2010 have customer bases ranging from 525 to 8,676 people.

* The state requires 530 ground water supplies and 293 surface water supplies to monitor for TTHM in Michigan. No water supply using ground water exceeded the TTHM threshold has been reported in more than five years.

* Flint's highest running annual average of 99 parts per billion at one site was the highest of any of the violations in the state since 2010. Other averages among the violations ranged from 82 to 88.

Flint's TTHM levels have been improving, but residents can still expect another notice that the city is in violation of the Safe Drinking Water Act again in March.

That's because disinfection byproduct levels were so high last year, that at least one testing site is guaranteed to remain higher than 80 ppb of TTHM as an annual average, even if February testing shows no TTHM there.

When the city issued federal violation notices to Flint customers in early January, it triggered a substantial public outcry. There were town hall meetings about the quality of Flint water, bottled water drives and several angry marches on City Hall.

Elsewhere, TTHM violations have largely gone unnoticed.

Tom Paige, director of the Bay County Department of Water and Sewer, described reaction there as "very minimal."

"I'm not sure we even got a half-dozen calls" from the notices sent to customers of Beaver Road Area Water Association, Beaver Township and Portsmouth Township, said Paige. He said he thinks the location of some sample sites as well as the source of the system's water -- the inner Saginaw Bay -- played parts in the violations.

Like Flint, Bay County communities are in the process of securing a new source of raw water -- Lake Huron -- and are also building a new treatment plant.

Flint has been using the Flint River as its source of water since April, ending 50 years of purchasing treated Lake Huron water from the Detroit Water and Sewerage Department.

The city is a partner with Genesee County in the Karegnondi Water Authority pipeline that's under construction and expected to be completed in 2018.

A preliminary report from Veolia recommended reducing organics in Flint River water before introducing chlorine, shortening the time that the disinfectant has to react with the organics.

Longer-term improvements to the water system, including replacement of transmission pipes and valves and a study aimed at finding the worst leaks in the transmission system, are also underway or expected to start soon.

When water temperatures rise later this year, so will the risk of bacteria in water -- something that led the city to use more chlorine in treatment in 2014. TTHM is the chemical fallout from chlorine use.

City Councilman Scott Kincaid is among those who have already predicted the city will continue to have problems with water quality as long as the Flint River remains the city's source of water.

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From: Workman, Wayne (TREASURY)
Sent: Tuesday, March 03, 2015 4:18 AM
To: Muchmore, Dennis (GOV)
Cc: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Re: Contaminated Drink Water if Flint

I am going to price the water to see how much we can buy

Sent from my iPhone

> On Mar 2, 2015, at 11:56 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.
>
> How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.
>
> If we procrastinate much longer in doing something direct we'll have real trouble.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> From: Kelly Rossman-McKinney
> <krossman@truscottrossman.com<mailto:krossman@truscottrossman.com>>
> Date: March 2, 2015 at 8:26:34 AM EST
> To: Dennis Muchmore
> <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>
> Subject: FW: Contaminated Drink Water if Flint
>
> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.
>
> [https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.
> png]
>
>
> Kelly Rossman-McKinney
> CEO
> Truscott Rossman •
> truscottrossman.com<http://www.truscottrossman.com/>
> Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
> 200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
> 125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

> Cell: [redacted]
> Office: (517) 487-9320
> Fax: (517) 487-5080
>
>
>
> From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
> Sent: Monday, March 02, 2015 7:36 AM
> To: Kelly Rossman-McKinney
> Subject: Fwd: Contaminated Drink Water if Flint
>
>
> Welcome to Monday. Please advise asap as to any next steps you recommend, if any.
> ---------- Forwarded message ----------
> From: "Dayne Walling"
> <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>
> Date: Mar 2, 2015 7:29 AM
> Subject: Fwd: Contaminated Drink Water if Flint
> To: "Gerald Ambrose"
> <gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>, "Natasha
> Henderson"
> <nhenderson@cityofflint.com<mailto:nhenderson@cityofflint.com>>,
> "Peter Bade" <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>
> Cc:
>
> FYI:
> ---------- Forwarded message ----------
> From: [redacted]
> Date: Sat, Feb 28, 2015 at 2:09 PM
> Subject: Contaminated Drink Water if Flint
> To: [redacted]
> [redacted]
> Cc: [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> "news@wjr.com<mailto:news@wjr.com>"
> <news@wjr.com<mailto:news@wjr.com>>,
> "assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>"
> <assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>>, [redacted]
> [redacted]
> fox2newsdesk@foxtv.com<mailto:fox2newsdesk@foxtv.com>,
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> "wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>"
> <wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>>,
> "wflt1420@aol.com<mailto:wflt1420@aol.com>"

> [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted], Eric Mays
> <emays@cityofflint.com<mailto:emays@cityofflint.com>>, Emergency
> Manager <em@cityofflint.com<mailto:em@cityofflint.com>>, [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> Vicky Van Buren
> <vvanburen@cityofflint.com<mailto:vvanburen@cityofflint.com>>, Jackie
> Poplar <jpoplar@cityofflint.com<mailto:jpoplar@cityofflint.com>>, [redacted]
> [redacted]
> [redacted]
> [redacted]
> "hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>"
> <hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>>, Inez
> Brown <ibrown@cityofflint.com<mailto:ibrown@cityofflint.com>>, Peter
> Bade <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>,
> "knelson@cityofflint.com<mailto:knelson@cityofflint.com>"
> <knelson@cityofflint.com<mailto:knelson@cityofflint.com>>, [redacted]
[redacted]Scott Kincaid
> <skincaid@cityofflint.com<mailto:skincaid@cityofflint.com>>, Dan
> [redacted]
> [redacted]
> [redacted]
> [redacted]
> [redacted]

> [redacted]
>
> Good Afternoon, Attorney Randall!
>
> Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!
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> We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!
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>
> Thank you very much in advance!!
>
> I remain.
>
> [redacted], Concerned Resident
>
>
>
> --
> Dayne Walling
> Mayor, City of Flint
> City Hall, 1101 S. Saginaw St.
> Flint, MI 48502
> 810-766-7346
> mayor@cityofflint.com<mailto:mayor@cityofflint.com>
> www.cityofflint.com<http://www.cityofflint.com/>
> follow me on twitter at http://twitter.com/mayorwalling
> <CCF02282015_0002.pdf>

From: Workman, Wayne (TREASURY)
Sent: Tuesday, March 03, 2015 11:53 AM
To: Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: RE: Contaminated Drink Water if Flint

If this does happen, we need to figure who would hand out the water. It should not be the City. It would undercut every point they are making. It probably should also be reserved for people who can't afford to buy water.

From: Muchmore, Dennis (GOV)
Sent: Monday, March 02, 2015 11:57 PM
To: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Fwd: Contaminated Drink Water if Flint

Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.

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Sent from my iPhone

Begin forwarded message:

> **From:** Kelly Rossman-McKinney <krossman@truscottrossman.com>
> **Date:** March 2, 2015 at 8:26:34 AM EST
> **To:** Dennis Muchmore <muchmored@michigan.gov>
> **Subject: FW: Contaminated Drink Water if Flint**
>
> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download of this picture from the Internet.
https://sites.google.com/a/truscottrossman.com/sct/7/home/email-logo.png

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
300 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503
[redacted]
Office: (517) 487-9320

Fax (517) 487-5080

From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
Sent: Monday, March 02, 2015 7:36 AM
To: Kelly Rossman-McKinney
Subject: Fwd: Contaminated Drink Water if Flint

Welcome to Monday. Please advise asap as to any next steps you recommend, if any.

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From: "Dayne Walling" <dwalling@cityofflint.com>
Date: Mar 2, 2015 7:29 AM
Subject: Fwd: Contaminated Drink Water if Flint
To: "Gerald Ambrose" <gambrose@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, "Peter Bade" <pbade@cityofflint.com>
Cc:

FYI:
---------- Forwarded message ----------
[redacted]
Date: Sat, Feb 28, 2015 at 2:09 PM
Subject: Contaminated Drink Water if Flint
[redacted]
Cc: "mail103@foxtv.com" <mail103@foxtv.com>, WFLT 1420 Am <wflt1420am@aol.com>, Abc12news <abc12news@abc12.com>, Wnem Desk <wnem@wnem.com>, Scot Johnson Wnem <scot.johnson@wnem.com>, "news@wjr.com" <news@wjr.com>, "assigmentdesk@wdiv.com" <assigmentdesk@wdiv.com>, "D. Adams" <dadams5@mlive.com>, fox2newsdesk@foxtv.com, "nikkibednarski@cumulus.com" [redacted], "[redacted] <[redacted], "B. Thorne" <bthorne@flintjournal.com>, "Rev. Reggie Flynn" <[redacted], "wxyzdesk@wxyz.com" <wxyzdesk@wxyz.com>, "wflt1420@aol.com" <wflt1420@aol.com>, "cspacouriernews@yahoo.com" <cspacouriernews@yahoo.com>, "[redacted] <[redacted], "promotion@wsmh.com" <promotion@wsmh.com>, Eric Mays <emays@cityofflint.com>, Emergency Manager <em@cityofflint.com>, Brenda Williams <[redacted], Wantwaz Davis <[redacted] Monica Galloway <[redacted], Sheldon Neeley <[redacted], Vicky Van Buren <vvanburen@cityofflint.com>, Jackie Poplar <jpoplar@cityofflint.com>, [redacted] "hwinford@cityofflint.com" <hwinford@cityofflint.com>, Inez Brown <ibrown@cityofflint.com>, Peter Bade <pbade@cityofflint.com>, "knelson@cityofflint.com" <knelson@cityofflint.com>, [redacted] Scott Kincaid <skincaid@cityofflint.com>, [redacted], "[redacted]

[redacted] Dyane Walling <dwalling@cityofflint.com>, [redacted]

Good Afternoon, Attorney Randall!

Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!

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The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluoride/ej.html regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.

Thank you very much in advance!!

I remain.

[redacted] Concerned Resident

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Wurfel, Brad (DEQ)
Sent: Thursday, March 05, 2015 4:26 PM
To: Hollins, Harvey (GOV); Wyant, Dan (DEQ); Agen, Jarrod (GOV)
Cc: Baird, Richard (GOV); Wurfel, Sara (GOV)
Subject: FW: Tap Filters

Harvey,
Since group call Tuesday I have been working out how the filter idea might take shape.

To reiterate some key points so we're all clear:

1. DEQ does not inspect individuals' homes in a situation like this. It's the city's system, their operators handle all complaints and maintenance. In fact, our folks alerted me that the city's got union rules in place forbidding any contractor from touching the system.

2. DEQ's role is limited to ensuring the plant is operating to state standards and the water it produces meets potability standards. The aesthetic issues drawing concern from residents -- color, odor, taste -- stem from a variety of things. Age of the system and prolonged lack of upkeep is the leading factor. But in some areas, another contributing factor is changes in water flow -- source used to come from the south, now comes from the north, so some pipes are flowing in reverse, stirring up whatever was settled for a long time. In some sections, large pipes that historically served large communities are now serving a much smaller customer base, contributing to water stagnating in the system. In some areas, household connections are old and worn, so two neighbors may be having dramatically different experiences. My point is, the challenge takes many forms and there's no single solution that will bring sweeping change. The two consultants hired by the city have, as I understand it, both reinforced this idea in their assessments, so that's good.

3. The fix for this will be years in the making, truly. Even if full funding were available, 'big dig' projects can't all happen at once. The city needs to get an assessment of its infrastructure so it can prioritize its needs, and I understand they're working on that. In the near term, maintenance this spring / summer -- things like cleaning the pipes in key sections and flushing the system via the hydrants -- could offer some short term results. I know nobody wants to just wait for spring, but that is something important to keep in mind.

4. In the meantime, the group discussed possibly making home water filters available somehow. The National Safety Foundation is a Michigan company, headquartered and founded in Ann Arbor, that develops standards for all kinds of infrastructure. They're a globally recognized source for standard setting. A look at their site reveals there are myriad filtration options on the market and within each type (faucet mounted, whole house line filters, etc) there are filters that focus on different aspects of purification.

   If this idea begins to get legs, I'd suggest testing some different models on the local water at the customer level to see if they work. I'd also suggest the idea be focused on tap-mounted models to promote clean, appealing drinking water. And I'd suggest this program could be funded in whole or in part by the state, but would need to be administered by the city (reinforcing the fact that they own, operate and service the system). I've got some information on filter models below.

Two more considerations: One, while the state has provided residents in some communities with bottled water in the past, it always has to do with their water being somehow contaminated – as in, some kind of chemical plume that impaired local drinking water sources. This would be the first time the state took steps to deal with what is an aesthetic issue on a system where the water is meeting state drinking water standards.

Water filter info:
ANSI NSF Standard 42 Covers bacteriostasis, taste and odor (associated only with chlorine removal), and other aesthetic conditions
http://standards.nsf.org/apps/group_public/download.php/19895/NSF_42-11%20-%20watermarked.pdf

ANSI NSF Standard 53 Covers health effects removal
http://standards.nsf.org/apps/group_public/download.php/19896/NSF_53-11a%20-%20watermarked.pdf

It is important to note that the filters are not required to meet all aspects of the standard, only the portions they want to make claims for. So product information for each filter must be reviewed to determine its applicability.

Most of these point of use filters are basic activated carbon filters that simply remove taste and odor specifically associated with chlorine, not other things like iron, manganese, hydrogen sulfide, etc. that can also impact taste and odor as well as color.

It is important to recognize that taste and odor is generally an individual preference and such standards have for the most part not been developed because groups of individuals may still consider taste and odor issues to exist even after levels for such a standard have been met.

Other considerations are that the test water for such filters attempting to meet the standard uses hardness levels of 170 mg/L or less. Flint's water at times may be above this level, which could then impact filter performance and longevity.

Most of these filters are designed to be replaced after 100 gallons or less of use, a period of about 3 months for most households. In addition the tests allow for initial pressure drops of up to 15 psi. This may limit use in households that already rely on minimum pressure within their household plumbing.

Regarding the health effects standards, as the Flint water system already meets such requirements, with the exception of the current TTHM locational running annual average, there is little point to the use of these filters for such a purpose.

To the point you'd asked about the other day, while Flint and Detroit are leading examples of unmaintained infrastructure, Flint is not alone by any means.

This recent infrastructure report card
http://www.infrastructurereportcard.org/michigan/michigan-overview/
Lists Michigan with a $13.8 Billion need over the next 20 years.

http://www.infrastructurereportcard.org/a/#p/state-facts/michigan

Here's a link to the 2009 Report Card for Michigan Infrastructure
http://www.michiganreportcard.com/

From the report:

"A significant portion of the state's primary distribution system is nearing 100 years old. CWS are facing a significant challenge to maintain the vast network of aging, underground infrastructure. Within the city of Detroit alone, approximately 80% of its distribution piping was installed prior to 1940, which is not unusual for CWS in Michigan."

"The age of the majority of the state's distribution system is the primary contributor to normal decay and failure. In many cases, pipe life has far exceeded useful service life. Much of the older water systems consist of undersized mains constructed of materials such as unlined cast iron pipe. Minor fluctuations in system flows or pressure may cause red water complaints and even result in pipe failure. All CWS should have routine flushing and valve maintenance programs; however many are hesitant due to the time and cost."

"Under the Stage 2 Disinfection Byproducts Rule, all CWS that disinfect are required to provide increased trihalomethane (THHM) and haloacetic acid (HAA5) monitoring due to the potential byproducts of chlorine reactions within the pipe system. Corrosion, scale, solid suspension on the interior sidewall of pipe, in addition to the age and condition of the system will require diligent rehabilitation investment to maintain system integrity."

"While better materials and advanced technology is available to replace the aging distribution system, resources remain scarce when compared with the magnitude of the rehabilitation task at hand. Too often, distribution system replacement costs are underfunded and the first item to be slashed when budget problems arise. Overall, distribution system maintenance is reactionary in much of the older systems. Since the majority of the antiquated system will require removal and replacement beyond the CWS funding resources for systematic upgrade, a reactionary rehabilitation program is inevitable and must be funded accordingly."

Call or email me if you need anything further.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Wurfel, Brad (DEQ)
Sent: Monday, March 16, 2015 4:20 PM
To: Agen, Jarrod (GOV)
Subject: Fwd: Part II

Sent from my iPhone

Begin forwarded message:

From: "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
Date: March 13, 2015 at 6:49:00 PM EDT
To: "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>
Cc: "Wyant, Dan (DEQ)" <WyantD@michigan.gov>
Subject: Part II

This is the second issue I mentioned earlier today.
In December, our staff became peripherally aware that the hospitals in Genesee were seeing an uptick in Legionnaires cases.

Legionnaires is a water-borne illness. It essentially is a type of pneumonia caused by a bacteria. It is treated with antibiotics. Untreated, it can be deadly. It most often manifests in nursing homes and assisted living facilities, because the transmission is through water vapor getting into lungs -- via air conditioners, vaporizers or low-flow shower heads that produce a lot of misting. You can drink water with this bacteria in it and not get sick -- it has to enter the lungs in vapor.

I don't have any details on the cases, but here is what I understand to this point:

- More than 40 cases reported since last April. That's a significant uptick -- more than all the cases in the last five years or more combined.

- April / May is usually the start of Legionnaires season -- it proliferates in warmer months -- but April also is the point at which the city switched to the Flint River as a source.

- County Health Departments are supposed to perform epidemiological tracebacks on all confirmed cases of this disease, to locate the source and address it. Genesee County Health had not done this work as of November. At a January meeting with area hospitals, MDCH, DEQ and others, Nick Lyon reportedly directed the county health folks, in terms not uncertain, to get this done as a priority. As I'm sitting here today, it still is not done to my knowledge.

- My counterparts at MDCH informed me today that they cannot step in unless they are invited or unless the outbreak is multi-county. They've not been invited until, I believe, today. That may be in part because of the email string and letter I've enclosed here, which was unknown to MDCH until I shared it over to them.

The email thread below is best read bottom-to-top, and read prior to reading the enclosed FOIA to the city.

Essentially, Jim Henry with Genesee County Health is putting up the flare. He's made the leap formally in his email that the uptick in cases is directly attributable to the river as a drinking water source -- this is beyond irresponsible, given that is his department that has failed to do the necessary traceback work to provide any conclusive evidence of where the outbreak is sourced, and it also flies in the face of the very thing a drinking water system is designed to do.

DEQ did not receive this FOIA, which appears designed to buttress his position in the email -- that sections of the water delivery system may be harboring this bacteria. We think it would be highly unlikely that anything would be found around the plant, where the water is treated. Most often, this bacteria forms at the building / residential point in the system. Legionnaires is NOT among the 90 water contaminants screened in the Safe Drinking Water Act, but in the absence of action by county health, our staff are now considering taking samples from various points in the system and working with DCH's lab to test for it, if for no other reason than to rule it out.

Regardless, the accusation is serious and the nature of the communication leaves me thinking we would be advantaged to bring together all the agencies asap to share what information we have and develop a response / screening strategy before the weather gets warm again.

I realize these are long emails. Thanks for your patience.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Shekter Smith, Liane (DEQ)
Sent: Thursday, March 12, 2015 8:41 AM
To: Wurfel, Brad (DEQ); Sygo, Jim (DEQ); Howes, Sarah (DEQ)
Cc: Shaler, Karen (DEQ); Benzie, Richard (DEQ); Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ)
Subject: FW: Information Request and Documentation
Importance: High

The district received this late Tuesday.

Steve Busch has indicated that the district has not received a meeting request from Jim Henry or the Genesee County Health Department as indicated in his email below.

The FOIA is specifically directed to the City of Flint not the DEQ.

While the change in source may have created water quality conditions that could provide additional organic nutrient source to support legionella growth, there is no evidence or confirmation of legionella coming directly from the Water Treatment Plant or in the community water supply distribution system at this time.

Seems like the next step is to communicate with DCH and possibly develop a joint strategy/response. Not sure who in Exec wants to take the lead on this. Steve Busch and Mike Prysby will continue to be lead for us on this. They have been in contact with DCH recently but only to learn that little progress has been made in identifying a source or sources for the illnesses.

EMAIL FROM DEQ TO HENRY SENT THIS AFTERNOON:

Mr. Henry,

The January 27, 2015, FOIA request you provided was directed to the City of Flint, not the DEQ. The DEQ has no record of a FOIA request from your office for such information. It is our understanding that the City has responded to your FOIA request, has helped you adequately redefine your request within the City's scope of public record to address such ambiguities as "any additional areas of concern", and provided you with additional information beyond the scope of your request.

The DEQ fully recognizes the public health threat posed to individuals that contract Legionnaires' Disease with the understanding that the disease is not contracted by ingestion of potable water and therefore not regulated under the federal Safe Drinking Water Act. Your email below claims that you have explicitly explained the situation to our Department. However, since contacting our office early last October to indicate a rise in cases, we have not received any further information regarding your epidemiological investigation into this matter.

Further, conclusions that legionella is coming from the public water system without the presentation of any substantiating evidence from your epidemiologic investigation appears premature and prejudice toward that end.

It is highly unlikely that legionella would be present in treated water coming from the City of Flint water treatment plant given the treatment plant's use of ozone along with complete treatment and chlorine disinfect contact time to comply with federal surface water treatment rules for potable water. Detections of total coliform or heterotrophic bacteria in the City's public water distribution system indicate an environment where bacterial growth may be supported. However, there is no direct correlation that can be made to the presence of legionella. While total organic carbon levels in potable water may serve as a food source for bacteria growth in private plumbing system, water temperatures in the City's distribution system are below legionella growth range, and chlorine residual levels would also limit such growth.

Our office agrees that water main breaks, water leaks, and system repairs are possible vectors for legionella to enter the public water system. These should be investigated as part of your epidemiology. DEQ staff can be made available to assist GCHD and the City regarding such matters, but to date no request by GCHD for any such meeting has been received, let alone declined as alleged in your email.

If GCHD is seeking assistance to complete its epidemiological investigation regarding this matter, such resource requests should be directed to the Michigan Department of Community Health. Our Office

agrees that a multi-agency partnership would be beneficial to move forward and develop a unified response. In that respect, if our Office can be of any further assistance you may contact me directly.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

This situation has been explicitly explained to MDEQ and many of the city's officials. I want to make sure, in writing that there are no misunderstandings regarding this significant and urgent public health issue. The Trihalomethane issues "pale in comparison" to the potential public health risks of Legionella.

I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4

Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

<FOIA Request Flint Water.doc>

From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 11:55 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Agen, Jarrod (GOV)
Cc: Clement, Elizabeth (GOV)
Subject: FW: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Here's part of our on-going problem.

-----Original Message-----
From: do-not-reply@detroitnews.com [mailto:do-not-reply@detroitnews.com]
Sent: Monday, August 3, 2015 11:49 AM
To: Muchmore, Dennis (GOV)
Subject: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Message from: muchmored@michigan.gov

Flint pastors tell residents to get their water tested

Some area pastors held a rally Sunday to urge residents to get their tap water tested

Check out this story on detroitnews.com: http://detne.ws/1SAH1K6

From:	Murray, David (GOV)
Sent:	Thursday, September 24, 2015 1:56 PM
To:	Hollins, Harvey (GOV); Lasher, Geralyn (DCH); Minicuci, Angela (DCH); Eisner, Jennifer (DCH); Clement, Elizabeth (GOV); Muchmore, Dennis (GOV); Agen, Jarrod (GOV); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ)
Cc:	Biehl, Laura (GOV); Brown, Jessica (GOV); Heaton, Anna (GOV)
Subject:	Flint lead data
Attachments:	Pediatric Lead Exposure Flint Water 092415 FINAL.pdf

Team,

Here's the data that will be presented at the Hurley Hospital press conference at 3 p.m. As you'll see, they are pointing to individual children, a very emotional approach. Our challenge will be to show how our state data is different from what the hospital and the coalition members are presenting today.

Dave

---------- Forwarded message ----------
From: **Andy Leavitt** <aleavitt@senatedems.org>
Date: Thu, Sep 24, 2015 at 1:41 PM
Subject: Data
To: Angela Wittrock <awittrock@senatedems.org>

Hey Angela,

Sorry for the delay. Dr. Mona Hanna-Attisha wanted to make a few changes to one of her slides.

Andy

PEDIATRIC LEAD EXPOSURE IN FLINT, MI: CONCERNS FROM THE MEDICAL COMMUNITY

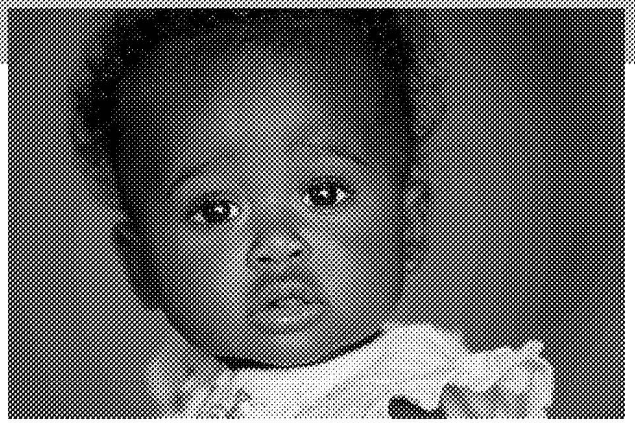
(this will not be written. I will introduce myself, Dr Reynolds can introduce himself and then I will say that we are here as a medical communtiy representing: GFHC, GCMS, Hurley Med Center, Hamilton Health Network)

THANK YOU'S

(this will not be written.

Thank you to Hurley for hosting this press conference, TY to grassroots organizers, prof Edwards and virginia tech, state and federal agencies involved in keeping our water safe, the city for being concerned and taking action, and health department for ensuring the safety of the entire population??

Introducing Makayla*



- 12 month old girl (DOB 8/15/2014) presented last week for her 1 year old check up. No concerns.
- Lives with single mom and 2 older siblings in west side (48504). Formula from WIC; powder mixed with warm tap water.
- Physical exam and development are normal. Makayla receives her 1 year old vaccines and routine lead and hemoglobin screening.
- *A couple days later, lead level comes back as 6 ug/dL.*

*Hypothetical scenario

Blood lead level of 6 ug/dL….

- Blood lead levels (BLL) above 5 ug/dL are considered elevated blood lead levels (EBL)
- Just a few years ago (2012), 10 ug/dL was cutoff
- Increasing evidence shows NO safe blood lead level
- Disproportionately impacts low income children
- Primary prevention is most important
  - Prevents exposure before it occurs!

Primary Prevention

- "Because no measurable level of blood lead is known to be without deleterious effects, and because once engendered, the effects appear to be irreversible in the absence of any other interventions, public health, environmental and housing policies should encourage PREVENTION of all exposure to lead."

"Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention." 2012 CDC Advisory Committee on Childhood Lead Poisoning Prevention.

What will happen to Makayla?

- Vast evidence supports increased likelihood of:
  - Decrease in IQ
    - An increase in BLL from 1 to 4 ug/dL, drops mean IQ -3.7 points
  - Small change in mean IQ, shifts entire population IQ distribution
    - Reduces high achievers IQs (>130) and increases kids with low IQs (<70)
    - Implications for early intervention, special education services, employment, incarceration, life achievement, etc

Lanphear BP et al., Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. Environ Health Perspect, 2005. 113:894-9.
Fewtrell LJ, Pruss-Ustun A, Landrigan P, and Ayuso-Mateos JL, Estimating the global burden of disease of mild mental retardation and cardiovascular diseases from environmental lead exposure. Environmental Research, 2004. 94:120-33.

Behavioral Burden

- Increased likelihood of :
  - ADHD behaviors
  - Delinquent behaviors and arrests
  - Total arrests and increased rates of arrests involving violent offenses
  - Other health effects: hematologic, cardiovascular, immunologic, endocrine, etc

Wright, JP, KN Dietrich, MD Ris, et al. 2008. Association of prenatal and childhood blood lead concentrations with criminal arrests in early adulthood. *PLoS Med* 5(5): e101

Chen, A, B Cai, KN Dietrich, et al. 2007. Lead exposure, IQ, and behavior in urban 5-7 year-olds: Does lead affect behavior only by lowering IQ? *Pediatrics* 119(3): e650-e658.

Needleman, HL, C McFarland, RB Ness, et al. 2002. Bone lead levels in adjudicated delinquents: A case control study. *Neurotoxicology and Teratology* 24(6):711-717.

The Cost

- "For childhood lead poisoning, $5.9 million in medical care costs, as well as an additional **$50.9 billion** (sensitivity analysis: $44.8–$60.6 billion) per year in lost economic productivity resulting from reduced cognitive potential from preventable childhood lead exposure."

- "The present value of Michigan's economic losses attributable to lead exposure in the 2009 cohort of 5 year-olds ranges from $3.19 (using U.S. blood lead levels) to **$4.85 billion** (using Michigan blood lead levels) per year in loss of future lifetime earnings."

Leonardo Trasande and Yinghua Liu. Reducing The Staggering Costs Of Environmental Disease In Children, Estimated At $76.6 Billion In 2008. *Health Affairs*, 30, no.5 (2011):863-870

The Price of Pollution: Cost Estimates of Environment-Related Childhood Diseases in Michigan. 2010 Report by Michigan Network of Children's Environmental Health

Lead in Water

- Increasing as source of lead because of success in controlling other sources.
- Increasing due to aging water infrastructures, change in water sources, disinfectant uses, etc
- Lots of variability in water lead levels depending on internal and external pipes, use of water, temperature, etc

- Disproportionally impacts developmentally-vulnerable formula-fed infants and pregnant mothers
  - Formula preparation

Triantafyllidou, S., Gallagher. D. and Edwards, M. Assessing risk with increasingly stringent public health goals: the case of water lead and blood lead in children. Journal of Water and Health. doi: 10.2166/wh.2013.067 58-68 (2014).
Edwards, M. Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water. Env. Sci. and Tech. 2013 DOI: 10.1021/es4034952

Role of the Pediatrician

- Prevention of everything to optimize children's health
- Lead screening as recommended by CDC and AAP at 1 and 2 years of age
- Inquiry and advocacy

RESEARCH FINDINGS

Results of Pediatric Blood Lead Levels

- **Methods**
  - Data from all blood lead levels processed at Hurley Medical Center
  - HMC Institutional Review Board (IRB) approved
  - All children under 5 years of age
  - Zip codes 48501-48507
  - Two periods of comparison:
    - PRE-SWITCH: January 1, 2013 – September 15, 2013
      - **WATER SWITCH APRIL 2014**
    - POST-SWITCH: January 1, 2015 – September 15, 2015

Results of Pediatric Blood Lead Levels

- **Methods**
  - Analyzed % Elevated Blood Lead (EBL)
    - EBL = Blood lead Levels > 5 g/dL
  - EBL analysis conducted based on scientific literature (most notably DC lead in water exposure)

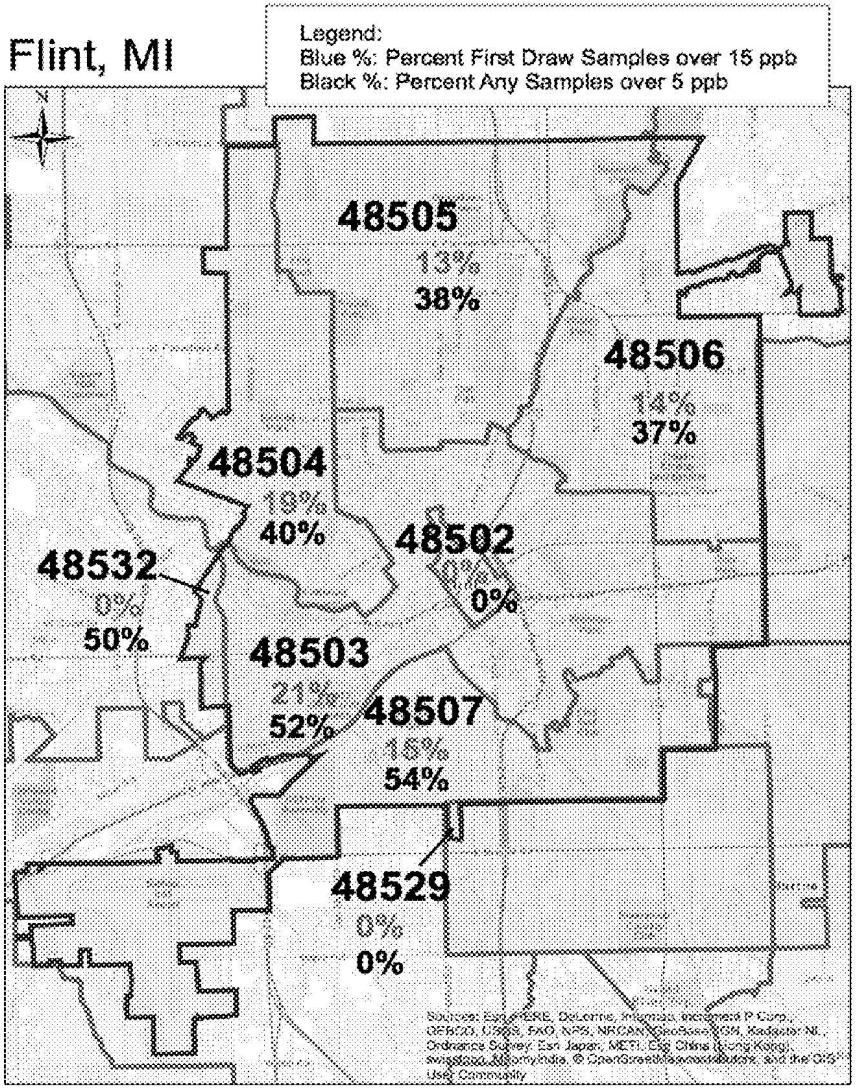
Blood Lead Level Analysis

- Large sample size
  - N= 1746 for Flint children (pre n=906, post n=840)
  - N= 1670 for non-Flint children (pre n=943, post n=727)

Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **2.1%** **(consistent with MDHHS data 2.2)**
- POST-SWITCH % EBL: **4.0%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**

Zip Codes With High Water Lead



- Focus on zip codes (48503 and 48504) with high water lead levels
- Total n=742, pre n=394, post n=348

Results:

- PRE-SWITCH % EBL: **2.5%**
- POST-SWITCH % EBL: **6.3%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**

What was rest of county doing?

- Analysis of same time periods for Genesee County children who live outside of City of Flint zips codes (non 48501-48507)
  - N=1670 for non-Flint children (pre n=943, post n=727)

Non-Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **0.6%**
- POST-SWITCH % EBL: **1.0%**
- **p = 0.637; NO STATISTICAL CHANGE**

Blood Lead Level Analysis

- % EBL all children less than 5 years of age

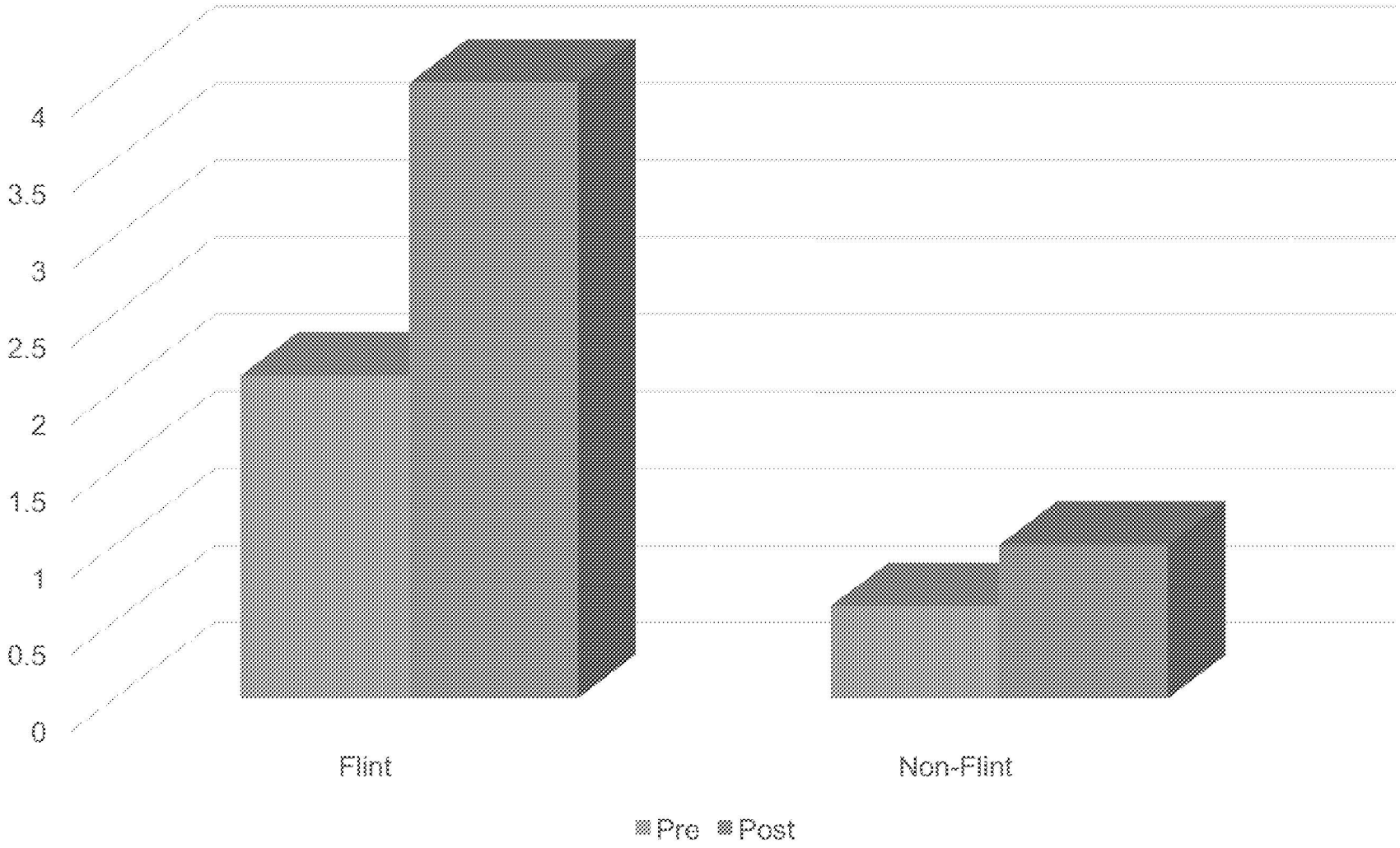
	ALL FLINT (n=1746)	HIGH-water lead FLINT (n=742)	REST OF FLINT (n=1004)	NON-FLINT (n=1670)
PRE-SWITCH	2.1%	2.5%	1.8%	0.6%
POST-SWITCH	4.0%	6.3%	2.4%	1.0%

Blood Lead Level Analysis – 15 month

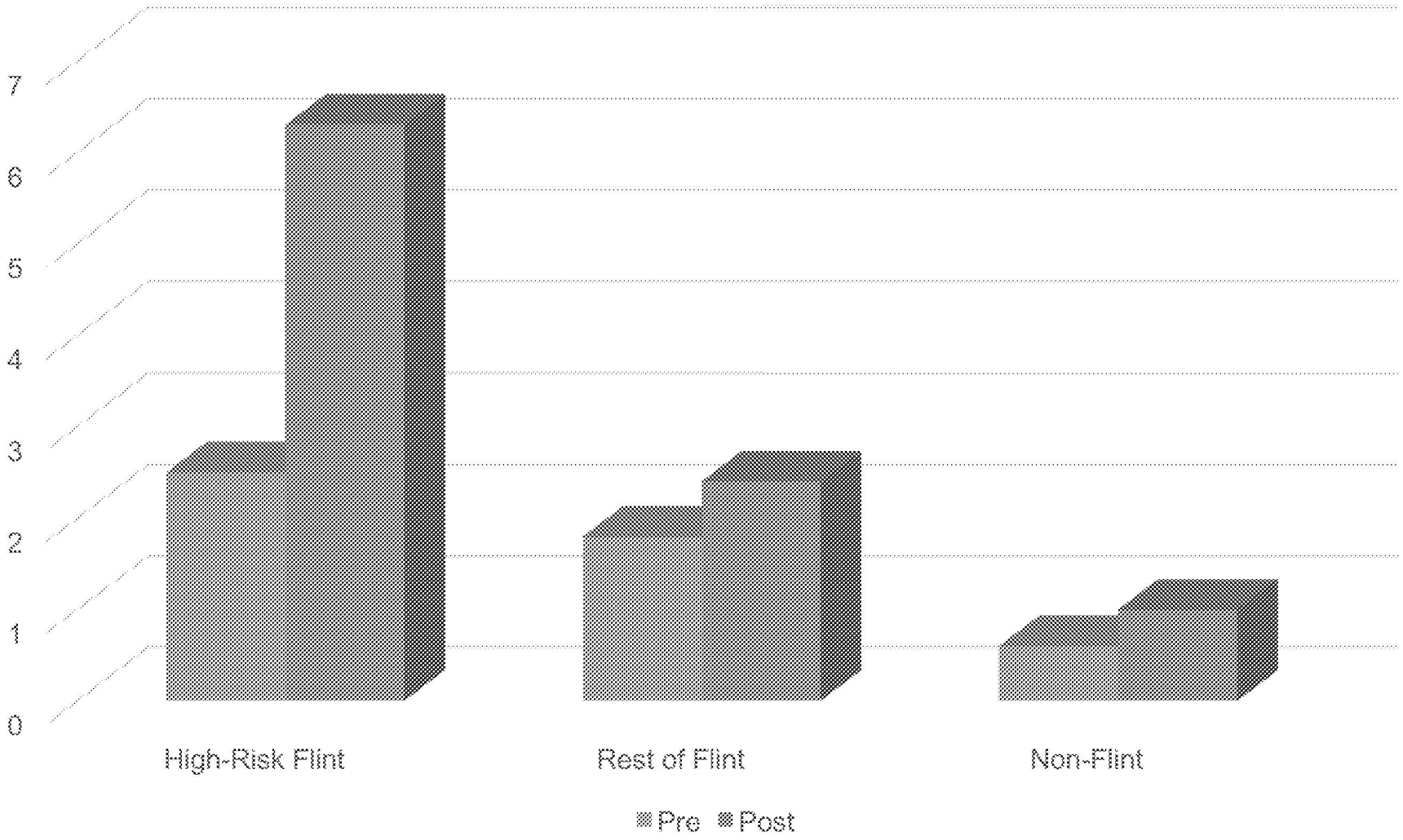
- % EBL children 15 months or less
  - Total Flint n=619, pre n=295, post n=324 (smaller sample size)
  - Total Non-Flint n=816, pre n=443, post n=376

	ALL FLINT (n=619)	HIGH-water lead (n=269)	REST OF FLINT (n=350)	NON-FLINT (n=816)
PRE-SWITCH	1.0%	1.5%	0.6%	0.5%
POST-SWITCH	2.5%	4.4%	1.1%	0.5%

Graphical Summary
Change in % EBL Flint vs Non-Flint



Graphical Summary
Change in % EBL by area



Conclusions from BLL analysis

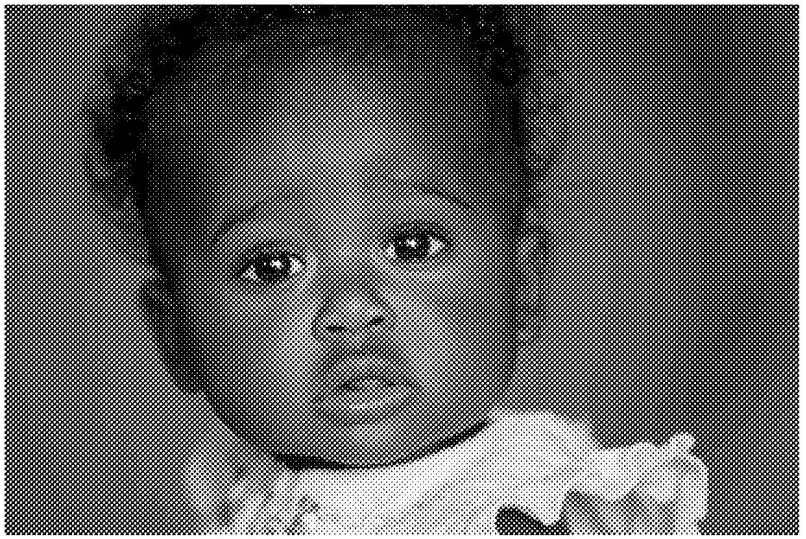
- Based on our research, % of children with EBL in Flint has increased
  - Most striking increase in zip codes with highest water lead levels
  - Also saw an increase in kids less than 15 months, sample small
- Results underestimate risk:
  - Infants not screened for lead
  - BLL may have peaked before being measured
  - Water usage has dropped

Recommendations

- AAP and CDC recommendation of primary prevention
- Limit further exposure
  - Encourage breast feeding
  - No tap water for high risk groups: infants on formula & pregnant mothers
  - Distribution of lead clearing NSF-approved filters
  - Public education regarding precautions (flushing, cold water, etc)
  - Connect to Lake Huron water source
- Support city's health advisory and health department's public education efforts

And Makayla…

- Asymptomatic now
- But what will her future hold and an entire generation of Flint children if we don't err on the side of safety?



From: Hollins, Harvey (GOV)
Sent: Wednesday, October 07, 2015 5:13 PM
To: Wyant, Dan (DEQ)
Cc: Muchmore, Dennis (GOV); Agen, Jarrod (GOV)
Subject: Flint.pdf
Attachments: Flint.pdf; ATT00001.htm

Per your request. This is the first of three emails with attachments. It is important to note that council did not take a vote to use Flint river. DWSD terminated the contract in April 2013 after the March 2013 vote which gave Flint one year left to use DWSD. The decision to use Flint river was made April 2014 instead of paying the cost to continue on DWSD until KWA was online.

EM SUBMISSION NO.: 2013EM041

PRESENTED: 3-28-13

ADOPTED: 3-29-13

BY THE EMERGENCY MANAGER:

RESOLUTION TO PURCHASE CAPACITY FROM KAREGNONDI WATER AUTHORITY

The Karegnondi Water Authority (KWA) is a governmental consortium of cities and counties in southeastern Michigan that was created to build a water pipeline that will provide water from Lake Huron to interested communities in Sanilac, Lapeer, and Genesee counties. The incorporating bodies that created the KWA are Sanilac County, Lapeer County, Genesee County, the City of Flint, and the City of Lapeer.

The City of Flint is currently in a year to year contract with the City of Detroit for the purchase of water. A study was conducted that projected that staying with Detroit will cost the region $2.1 billion over the next 25 years. In contrast, if the region builds its own pipeline, the projected costs are $1.9 billion over the same period. After the initial 25 year period, the projected costs would be less then 25% of the projected water costs from Detroit.

In order to build the pipeline, the KWA needs commitment from its members regarding the capacity that each member will purchase in the pipeline. The KWA is allowed to withdraw 85 million gallons of water per day. Capacity is available to members in increments of 1 million gallons per day known as units. For each unit of capacity that a member purchases, the buyer shall pay to the KWA a one time fee of $32,300.00. Additionally, the buyer shall pay to the KWA not less then $32,300.00 per unit per year until such time as water is made available to the buyer. After water is made available, the buyer shall pay to the KWA an estimated amount not to exceed $355.300.00 per unit per year until such time that the bonds are paid in full. If it is determined that the costs per unit will exceed $355,300.00 the buyer has a right to cancel the contract.

The purchase of capacity along with the payment of other costs necessary to operate the pipeline gives the member a right to water for sale to its customers. The buyer has a right to resell capacity and water rights. Each party entering into a capacity contract shall also be entitled to appoint additional board members equal to the party's percentage share of the total capacity under contract.

It is in the long term best interests of the City of Flint to enter into a contract with the KWA to purchase up to eighteen (18) units of capacity.

IT IS RESOLVED that City officials are authorized to enter into a contract with KWA to purchase up to eighteen (18) units of capacity.

IT IS FURTHER RESOLVED that the City Administrator is authorized to provide KWA information needed to administer the contract and, with approval of the Chief Legal Officer, to make minor (non-material) modifications to the contract.

APPROVED AS TO FORM:

Peter M. Bade, City Attorney

APPROVED AS TO FINANCE:

For **Gerald Ambrose, Finance Director**

EM DISPOSITION:

ENACT 1/ **FAIL** _____ **DATED** 3-29-13

Edward L. Kurtz, Emergency Manager

S:\P. Bade\EM2013\Resolutions\KWA.03.28.13.doc

Flint

Flint City Council approves resolution to buy water from Karegnondi, state approval still needed

[http://connect.mlive.com/staff/dadams1/index.html] By Dominic Adams | dadams5@mlive.com [http://connect.mlive.com/staff/dadams1/posts.html]
Follow on Twitter [http://www.twitter.com/dominicadams]
on March 25, 2013 at 10:45 PM, updated March 26, 2013 at 1:28 AM

FLINT, MI – Flint is one step closer to getting its water from Lake Huron as part of the Karegnondi Water Authority.

The vote, **approved 7-1 at the Flint City Council meeting Monday, March 25 [http://www.mlive.com/news/flint/index.ssf/2013/03/flint_city_council_again_delay.html]** , may have set in motion the end to Flint paying to get its water from Detroit.

Under the proposal, Flint would get 16 million gallons per day of raw water from Lake Huron, pipe it to Flint for treatment and then sell it to customers throughout the city. Another 2 million gallons per day would come from the Flint River and will be treated in Flint.

Mayor Dayne Walling said the Department of Environmental Quality must approve Flint's getting 2 million gallons per day from the Flint River.

Tuesday's meeting followed weeks of discussions and special meetings surrounding the resolution.

"We got there," Councilman Joshua Freeman said. "That's the important thing."

There were more than 50 people at Monday's meeting.

"Going with Karegnondi is the best decision. We have no opinion on the economics of the decision," said Rebecca Fedewa, Flint River Watershed Coalition executive director. "If we start drawing water out of the Flint River, we are at risk of having to start releasing water from our reservoirs."

Genesee County Drain Commissioner Jeff Wright said the decision must still be approved by a county water and waste advisory board. The KWA board will then be reconvened for final approval.

Wright said construction could start in May.

State treasury officials still must approve the city council's move because Flint has an emergency financial manager. All expenditures over $50,000 must be approved.

Genesee County Drain Commissioner Jeff Wright has said that Flint would pay roughly $6.4 million annually for water service if it joined the pipeline – a nearly $4 million savings on what it pays Detroit for water.

Walling previously said the **city would save $19 million over eight years [http://www.mlive.com/news/flint/index.ssf/2013/03/flint_city_council_delays_deci.html]** by getting water from the KWA.

"It's a historic night in the City of Flint," Walling said. "The savings will be less with the capacity level approved by city council because there will be increased treatment cost for the river water."

He said the DEQ told the city it needed to get 18 million gallons per day or there would have to be additional work done at Flint's water plant.

Flint's water plant and the Flint River is currently the backup for Flint and Genesee County, however, the plant only operates four times per year.

Councilman Bryant Nolden was the lone dissenting vote.

"It was a protest vote," Nolden said. "I knew they had enough votes. I just feel like the Flint River is our best option."

Karengnondi is the regional water authority that includes Genesee, Lapeer and Sanilac counties and the cities of Flint and Lapeer.

Flint is the second municipality, behind Genesee County, to officially decide to purchase raw water through the KWA. Lapeer city officials said they intend to purchase water, but an agreement has been finalized.

*Dominic Adams is a reporter for MLive-Flint Journal. Contact him at **dadams5@mlive.com** or 810-241-8803. Follow him on **Twitter [http://www.twitter.com/dominicadams]** , **Facebook [http://www.facebook.com/dominic.adams.1865]** or **Google+ [https://plus.google.com/103690672506808729911?rel=author]** .*

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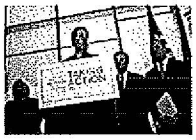
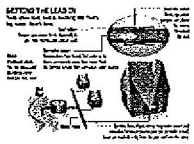


Price of Detroit water for Flint is $1.5 million a month, mayor says

[http://www.mlive.com/news/flint/index.ssf/2015/10/mayor_city_ad



Here's how that toxic lead gets into Flint water

[http://www.mlive.com/news/flint/index.ssf/2015/10/see_step_by_s

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GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE
JEFFREY WRIGHT
COMMISSIONER
G-4608 BEECHER ROAD, FLINT, MI 48532
PHONE (810) 732-1590 FAX (810) 732-1474

FOR IMMEDIATE RELEASE

CONTACT: Jeff Wright

March 26, 2013

810-287-1925

What: Jeff Wright Statement on Flint City Council Approving Resolution to Join KWA.

When: March 26, 2013

Additional Info: Jeff Wright, CEO of the KWA, today praised the Flint City Council for voting to approve a resolution to officially have the City of Flint join the KWA and its' water line.

"I have said from the beginning that this decision must be made by Flint's City Council and Mayor," said Wright. "I appreciate the council voting the way they did, but even more than that, I am glad the residents of Flint were able to have their voices heard via their elected officials." The next step in the process will come with the KWA Board executing the contract for the City.

"The most important aspect from the vote is the fact that we as an Authority can move forward knowing Flint's intentions," said Wright.

Despite Emergency Manager Ed Kurtz publicly supporting the project, Wright had made a vote by council a condition of Flint joining the KWA so the residents would have their say.

"There is a basic tenet that government is best when it has local control. We saw that with the council vote. Nobody, whether they live in Flint, Grand Blanc, Davison, Fenton, or anywhere in Genesee County, should have these types of decisions made by people who live outside of their community," said Wright.

At the next Water and Waste Advisory Board meeting a vote will be taken to award a contract for construction of the intake portion of the water line. All bids were submitted to the board at their last meeting for review.

89 (Rev. 02-11)

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

ANDY DILLON
STATE TREASURER

April 11, 2013

Mr. Edward Kurtz
Emergency Manager
City of Flint
1101 South Saginaw Street
Flint, MI 48502

Dear Mr. Kurtz:

Thank you for your March 29, 2013 letter, which is attached for reference. As the Emergency Manager for the City of Flint ("Flint" or "City"), you have asked for my concurrence, pursuant to Public Act 436 of 2012, the Local Financial Stability and Choice Act, to authorize a contract in excess of $50,000.00 not subject to competitive bidding. This request was related to the City entering into an agreement with the Karegnondi Water Authority (KWA) for provision of raw water for the City.

In considering your request, I took note of the following facts in support of Flint joining KWA. First, there is widespread support in the City for this move, including the support of the Mayor, the City Council, and the Emergency Manager. Second, this move will provide a unique opportunity for the City and County to partner on an important project, which will hopefully lead to future regional collaboration. Third, the Department of Environmental Quality is supportive of the City participating in the KWA project. Finally, your representations that this deal will lead to substantial savings for the City over the coming decades, savings that are desperately needed to help with the turnaround of the City of Flint.

It is my understanding that the Detroit Water and Sewer Department is making a final best offer to Genesee County and the City of Flint next Monday, April 15, 2013. As such, this approval will be effective at 5 pm on April 16, 2013 after receiving written notice from the City that either no such offer was presented to the county and the City or that an offer was received and was rejected in good faith based upon specified objections.

For the reasons described above and subject to the conditions set forth herein, pursuant to Section 12 (3) of PA 436 of 2012, I am authorizing you to proceed with adopting the resolution and entering into a contract with KWA.

Sincerely,

Andy Dillon
State Treasurer

Flint

Flint council supports buying water from Lake Huron through KWA

[http://connect.mlive.com/staff/dadams1/index.html] By Dominic Adams | dadams5@mlive.com [http://connect.mlive.com/staff/dadams1/posts.html]
Follow on Twitter [http://www.twitter.com/dominicadams]
on March 25, 2013 at 7:17 PM, updated March 26, 2013 at 7:43 AM

FLINT, MI -- Flint residents may soon get their water from Lake Huron.

The Flint City Council voted 7-1 to get 16 million gallons per day from the Karegnondi Water Authority.

"This is about compromise," said Councilman Sheldon Neeley.

Neeley got support from Councilman Joshua Freeman, after the two were previously at odds about the amount the city should withdraw from Lake Huron.

Councilman Bryant Nolden was the lone "no" vote.

"It was a protest vote," Nolden said. "I just feel like the Flint River is our best option."

Genesee County Drain Commissioner said construction of the pipeline could start in May.

The city currently pays to get its water from Detroit.

State treasury officials still must approve the city council's move because Flint has an emergency financial manager. All expenditures over $50,000 must be approved.

*Dominic Adams is a reporter for MLive-Flint Journal. Contact him at **dadams5@mlive.com** or 810-241-8803. Follow him on **Twitter [http://www.twitter.com/dominicadams]** , **Facebook [http://www.facebook.com/dominic.adams.1865]** or **Google+ [https://plus.google.com/103690672506808729911?rel=author]** .*

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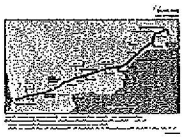
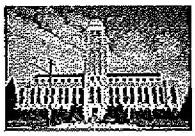


Enbridge can begin piping tar sands oil along Lake Ontario north shore

[http://www.mlive.com/news/index.ssf/2015/10/enbridge_can_beg



Former Detroit American Motors Corp. headquarters being auctioned; starting bid $500

[http://www.mlive.com/news/detroit/index.ssf/2015/10/former_detr

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http://www.mlive.com/news/flint/index.ssf/2013/07/city_readying_water_plant_to_t.html

Best,
Harvey

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 19, 2015 11:32 AM
To: Wurfel, Sara (GOV); Agen, Jarrod (GOV)
Subject: FW: Flint water

What do you want me to do?

From: Egan, Paul [mailto:pegan@freepress.com]
Sent: Thursday, November 19, 2015 11:17 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Flint water

Hi Dennis: Some time ago I obtained former Treasurer Andy Dillon's appointment calendar, under FOIA.
On March 25, 2013, at 5 p.m., it lists: "Call with Dennis Muchmore regarding Flint Water Supply Alternatives."
Later that evening, the city council of Flint, which was under a state-appointed emergency manager, voted to switch its water supply from the city of Detroit to a new Karegnondi Water Authority.
Can you please call me to discuss your/the state's role in that decision?
Also, for another time, maybe in December, would love to do an exit interview before you leave your current post.
Thanks, Paul
o. 517-372-8660
[redacted]

From: Wurfel, Sara (GOV)
Sent: Thursday, November 19, 2015 12:16 PM
To: Muchmore, Dennis (GOV)
Cc: Agen, Jarrod (GOV)
Subject: Re: Flint water

JA and I talked. Best if I can follow up with Paul.

Ditto on any Steelcase/pyramid calls. Pls pass along.

Would rather focus and plan for host of media interviews for you as your tenor winds down and more toward your transition date :}

Sent from my iPhone

On Nov 19, 2015, at 11:31 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> What do you want me to do?
>
> ---
>
> **From:** Egan, Paul [mailto:pegan@freepress.com]
> **Sent:** Thursday, November 19, 2015 11:17 AM
> **To:** Muchmore, Dennis (GOV) <muchmored@michigan.gov>
> **Subject:** Flint water
>
> Hi Dennis: Some time ago I obtained former Treasurer Andy Dillon's appointment calendar, under FOIA. On March 25, 2013, at 5 p.m., it lists: "Call with Dennis Muchmore regarding Flint Water Supply Alternatives."
> Later that evening, the city council of Flint, which was under a state-appointed emergency manager, voted to switch its water supply from the city of Detroit to a new Karegnondi Water Authority.
> Can you please call me to discuss your/the state's role in that decision?
> Also, for another time, maybe in December, would love to do an exit interview before you leave your current post.
> Thanks, Paul
> o. 517-372-8660
> [redacted]

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 19, 2015 2:44 PM
To: Wurfel, Sara (GOV)
Cc: Agen, Jarrod (GOV)
Subject: RE: Flint water

I'm all for that...besides I can't specifically recall that phone call although I have a general idea...we had several. They generally focused on the same things.

From: Wurfel, Sara (GOV)
Sent: Thursday, November 19, 2015 12:16 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Cc: Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Subject: Re: Flint water

JA and I talked. Best if I can follow up with Paul.

Ditto on any Steelcase/pyramid calls. Pls pass along.

Would rather focus and plan for host of media interviews for you as your tenor winds down and more toward your transition date :}

Sent from my iPhone

On Nov 19, 2015, at 11:31 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> What do you want me to do?
>
> ---
>
> **From:** Egan, Paul [mailto:pegan@freepress.com]
> **Sent:** Thursday, November 19, 2015 11:17 AM
> **To:** Muchmore, Dennis (GOV) <muchmored@michigan.gov>
> **Subject:** Flint water
>
> Hi Dennis: Some time ago I obtained former Treasurer Andy Dillon's appointment calendar, under FOIA.
> On March 25, 2013, at 5 p.m., it lists: "Call with Dennis Muchmore regarding Flint Water Supply Alternatives."
> Later that evening, the city council of Flint, which was under a state-appointed emergency manager, voted to switch its water supply from the city of Detroit to a new Karegnondi Water Authority.
> Can you please call me to discuss your/the state's role in that decision?
> Also, for another time, maybe in December, would love to do an exit interview before you leave your current post.
> Thanks, Paul
> o. 517-372-8660
> [redacted]

From: Muchmore, Dennis (GOV)
Sent: Tuesday, December 15, 2015 12:12 PM
To: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Hollins, Harvey (GOV); Clement, Elizabeth (GOV); Stanton, Terry A. (Treasury); Sampson, Jeremy (TREASURY); Agen, Jarrod (GOV); Wurfel, Brad (DEQ)
Subject: RE: PRESS RELEASE- STATE OF EMERGENCY DECLARED

With the declaration apparently the Mayor is appealing for Fed help to Cong. Kildee. That seems reasonable.

From: Workman, Wayne (TREASURY)
Sent: Tuesday, December 15, 2015 10:32 AM
To: Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Clement, Elizabeth (GOV) <clemente@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Sampson, Jeremy (TREASURY) <SampsonJ@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>
Subject: FW: PRESS RELEASE- STATE OF EMERGENCY DECLARED

FYI

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Byrne, Randall (Treasury)
Sent: Tuesday, December 15, 2015 9:50 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>
Subject: FW: PRESS RELEASE- STATE OF EMERGENCY DECLARED

Wayne and Suzanne:

Mayor Weaver declared a State of Emergency in Flint last night. I have attached a copy for your review. Natasha tried to discourage her from proceeding on this. FYI, I am going to call the Mayor on the search. It doesn't sound like she wants to use Tom for the search.

Randy,

From: Natasha Henderson [mailto:nhenderson@cityofflint.com]
Sent: Tuesday, December 15, 2015 9:40 AM
To: Byrne, Randall (Treasury) <ByrneR1@michigan.gov>
Subject: Fwd: PRESS RELEASE- STATE OF EMERGENCY DECLARED

Thanks,

Natasha L. Henderson, City Administrator
1101 S. Saginaw St.
Flint, MI
Email: nhenderson@cityofflint.com
Phone: (810) 237-2057
www.cityofflint.com

---------- Forwarded message ----------
From: "Sean Kammer" <skammer@cityofflint.com>
Date: Dec 14, 2015 10:32 PM
Subject: PRESS RELEASE- STATE OF EMERGENCY DECLARED
To:
Cc:

Mayor Karen Weaver Declares State of Emergency

Flint, MI – December 14, 2015 – Mayor Karen Weaver has declared a State of Emergency in response to a man-made disaster caused by the City switching to the Flint River as a water source. This switch has resulted in elevated lead levels in drinking water which prompted both the City and the County Health department to issue a health advisory earlier this year.

Mayor Weaver states that this was one of the things she had promised to do while campaigning for mayor.

Declaring an emergency intends to help raise awareness of the issue that the water is still not safe to drink and activates the City's Emergency Support Plan in order to respond to the crisis.

On October 16 of this year, the City switched back to the Detroit Water and Sewerage Department as the source of water, however lead levels remain well above the federal action level of 15 parts per billion in many homes. Residents are advised to continue using water filters while long term solutions are being developed.

The Mayor will hold a press conference about the State of Emergency on Tuesday, December 15 at 2pm at City Hall.

END

--

Sean Kenneth Kammer, MPA
Assistant to the City Administrator
City of Flint, Michigan
1101 S. Saginaw St.
Flint, MI 48502
810-237-2025

From: Agen, Jarrod (GOV)
Sent: Friday, February 06, 2015 3:59 PM
To: Muchmore, Dennis (GOV); Baird, Richard (GOV); Clement, Elizabeth (GOV)
Subject: FW: Flint Water

Heads up -- given all the good coverage we got from our Flint water event earlier this week, this seems like an attempt to throw us back under the bus and draw more controversy/publicity to the water issue.
I would advise we stir very clear of this event or helping to orchestrate it.

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Dave & Harvey: We are working with Veolia North America, the water consulting team Flint has hired to "assess the situation." We're planning to hold a media roundtable with city officials on Tuesday to introduce the Veolia team to local reporters. Gerry Ambrose suggested we invite some of the folks you invited to attend the newser earlier this week. Is that a list you can share with me or would it be better for the invite to come from you or the EM directly? I don't have a specific time yet but can provide that information for you when it is available. What do you think?

Kelly

PS I forgot to say thanks!!!!

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download of this picture from the Internet.
https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.png

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503
[redacted]
Office: (517) 487-9320
Fax: (517) 487-5080

From: Agen, Jarrod (GOV)
Sent: Tuesday, March 03, 2015 8:48 AM
To: Murray, David (GOV)
Subject: FW: Contaminated Drink Water if Flint

-----Original Message-----
From: Workman, Wayne (TREASURY)
Sent: Tuesday, March 03, 2015 4:18 AM
To: Muchmore, Dennis (GOV)
Cc: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Re: Contaminated Drink Water if Flint

I am going to price the water to see how much we can buy

Sent from my iPhone

> On Mar 2, 2015, at 11:56 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.
>
> How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.
>
> If we procrastinate much longer in doing something direct we'll have real trouble.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> From: Kelly Rossman-McKinney
> <krossman@truscottrossman.com<mailto:krossman@truscottrossman.com>>
> Date: March 2, 2015 at 8:26:34 AM EST
> To: Dennis Muchmore
> <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>
> Subject: FW: Contaminated Drink Water if Flint
>
> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.
>
> [https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.
> png]

>
>
> Kelly Rossman-McKinney
> CEO
> Truscott Rossman •
> truscottrossman.com<http://www.truscottrossman.com/>
> Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
> 200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
> 125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503
>
[redacted]
> Office: (517) 487-9320
> Fax: (517) 487-5080
>
>
>
> From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
> Sent: Monday, March 02, 2015 7:36 AM
> To: Kelly Rossman-McKinney
> Subject: Fwd: Contaminated Drink Water if Flint
>
>
> Welcome to Monday. Please advise asap as to any next steps you recommend, if any.
> ---------- Forwarded message ----------
> From: "Dayne Walling"
> <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>
> Date: Mar 2, 2015 7:29 AM
> Subject: Fwd: Contaminated Drink Water if Flint
> To: "Gerald Ambrose"
> <gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>, "Natasha
> Henderson"
> <nhenderson@cityofflint.com<mailto:nhenderson@cityofflint.com>>,
> "Peter Bade" <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>
> Cc:
>
> FYI:
> ---------- Forwarded message ----------
>[redacted]
> Date: Sat, Feb 28, 2015 at 2:09 PM
> Subject: Contaminated Drink Water if Flint
>[redacted]
>[redacted]
> Cc: "mail103@foxtv.com<mailto:mail103@foxtv.com>"
> <mail103@foxtv.com<mailto:mail103@foxtv.com>>, WFLT 1420 Am
> <wflt1420am@aol.com<mailto:wflt1420am@aol.com>>, Abc12news
> <abc12news@abc12.com<mailto:abc12news@abc12.com>>, Wnem Desk
> <wnem@wnem.com<mailto:wnem@wnem.com>>, Scot Johnson Wnem
> [redacted],
> "news@wjr.com<mailto:news@wjr.com>"
> <news@wjr.com<mailto:news@wjr.com>>,
> "assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>"
> <assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>>, "D. Adams"

> [redacted]
> fox2newsdesk@foxtv.com<mailto:fox2newsdesk@foxtv.com>,
> [redacted]
> [redacted]
> [redacted]
> [redacted], "B. Thorne"
> [redacted]
> "wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>"
> <wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>>,
> "wflt1420@aol.com<mailto:wflt1420@aol.com>"
> <wflt1420@aol.com<mailto:wflt1420@aol.com>>,
> "cspacouriernews@yahoo.com<mailto:cspacouriernews@yahoo.com>"
> <cspacouriernews@yahoo.com<mailto:cspacouriernews@yahoo.com>>,
> [redacted]
> [redacted]
> "promotion@wsmh.com<mailto:promotion@wsmh.com>"
> <promotion@wsmh.com<mailto:promotion@wsmh.com>>, Eric Mays
> <emays@cityofflint.com<mailto:emays@cityofflint.com>>, Emergency
> Manager <em@cityofflint.com<mailto:em@cityofflint.com>>, Brenda
> Williams
> [redacted]
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> <vvanburen@cityofflint.com<mailto:vvanburen@cityofflint.com>>, Jackie
> Poplar <jpoplar@cityofflint.com<mailto:jpoplar@cityofflint.com>> [redacted]
> Wantwaz Davis <wdavis@cityofflint.com<mailto:wdavis@cityofflint.com>>,
> [redacted]
> "hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>"
> <hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>>, Inez
> Brown <ibrown@cityofflint.com<mailto:ibrown@cityofflint.com>>, Peter
> Bade <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>,
> "knelson@cityofflint.com<mailto:knelson@cityofflint.com>"
> <knelson@cityofflint.com<mailto:knelson@cityofflint.com>>, [redacted]
> [redacted] Scott Kincaid
> <skincaid@cityofflint.com<mailto:skincaid@cityofflint.com>>, [redacted]
> [redacted], Gregory Eason
> [redacted]

[redacted] Dyane Walling
> <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>, [redacted]
[redacted]
>
> Good Afternoon, Attorney Randall!
>
> Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!
>
> We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!
>
> I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.
>
> The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluroride/ej.html<http://www.actionpa.org/fluroride/ej.html> regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.
>
> Thank you very much in advance!!
>
> I remain.
>
[redacted], Concerned Resident
>
>
>
> --
> Dayne Walling
> Mayor, City of Flint

> City Hall, 1101 S. Saginaw St.
> Flint, MI 48502
> 810-766-7346
> mayor@cityofflint.com<mailto:mayor@cityofflint.com>
> www.cityofflint.com<http://www.cityofflint.com/>
> follow me on twitter at http://twitter.com/mayorwalling
> <CCF02282015_0002.pdf>

From: Agen, Jarrod (GOV)
Sent: Friday, September 25, 2015 12:44 PM
To: Murray, David (GOV)
Subject: Re: Questions About Flint Water

I think it's perfectly fair to say the emergency manager took the action following an 8-1 vote of the Flint City Council and the recommendation from the mayor.

Sent from my iPhone

> On Sep 25, 2015, at 12:41 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:
>
> Jarrod,
>
> The first question from this Flint television reporter might be the opening we are looking for. I know we're being RPA and careful, but can I use this as an opportunity to point out that the emergency manager took the action following an 8-1 vote of the Flint City Council and the recommendation from the mayor -- and that the EM was following the wishes of the local leaders?
>
> It's not like the vote was a secret, and there are stories about it at the time. We've tread lightly there before, but her question allows us to state that accurately and openly. Can I go there?
>
> Here question:
>
> 1 - When the City of Flint switched from the Detroit Water system to the Flint River under the leadership of Darnell Earley, what was the thought process or reasoning behind that?
>
> What do you think?
>
>
> -----Original Message-----
> From: Dupnack, Jessica [mailto:jessica.dupnack@abc12.com]
> Sent: Friday, September 25, 2015 12:24 PM
> To: Murray, David (GOV) <MurrayD1@michigan.gov>
> Subject: Questions About Flint Water
>
> Hello! Below are the questions I'm requesting. It pertains to recent findings by Virginia Tech University and physicians at Hurley Medical Center that show elevated levels of Lead in the water. Particularly unsafe levels found in children's bloodstream in Flint. Both are blaming Flint River water as the cause for these levels. As they were compared to Lead blood levels in children prior to switching from the Detroit Water System to the Flint River.
>
> 1 - When the City of Flint switched from the Detroit Water system to the Flint River under the leadership of Darnell Earley, what was the thought process or reasoning behind that?
>
> 2 - What kind of specific analysis was done before making those decisions. Not speaking to the financial analysis but rather the scientific study of what switching sources could potentially mean?
>

> 3 - There has been a big push from residents, nationally renown scientists and now the medical community to switch back to The Detroit Water System because it is less corrosive. In turn, reducing the amount of Lead in the system due to the highly corrosive Flint River Water. What would it take to do so given that under PA 436 the decision made under Earley cannot be reversed?
>
> 4 - Has he Governor been in contact with City of Flint officials regarding this matter?
>
> 5 - Flint Mayor Dayne Walling has requested financial support from the state in helping with what some are calling a Lead crisis. Is that something the Governor is considering? Given that the decision to switch off of Detroit was under the backing of the Department of Treasury i.e. Darnell Earley.
>
> Thanks!
> Jessica Dupnack

From: Agen, Jarrod (GOV)
Sent: Tuesday, October 06, 2015 10:30 AM
To: Scott, Allison (GOV)
Subject: Flint/Dan call

I'm very concerned that things will get worse before they get better in Flint.
Have not discussed with anyone, but we may need to get the Gov into Flint for a manageable event (filter distribution, testing visit, etc..) -- maybe even multiple visits.
I'd like to join him for the call with Wyant today and get both their thoughts.

From: Wisniewski, Wendy (GOV)
Sent: Wednesday, January 21, 2015 11:41 AM
To: Clayton, Stacie (GOV); Pleyte, Beth (Treasury); Rospond, Laurie (GOV)
Subject: RE: Flint Water Meeting

They are Dick's meetings so I'm including Laurie on this email

---

From: Clayton, Stacie (GOV)
Sent: Wednesday, January 21, 2015 11:39 AM
To: Pleyte, Beth (Treasury); Wisniewski, Wendy (GOV)
Subject: Flint Water Meeting

Beth and Wendy,

Harvey would like to be included in the meeting Dennis and Tom are having regarding the Flint Water matter. I believe it will be on January 28. Will you please let me know the details?

Thank you,
Stacie

From: Murray, David (GOV)
Sent: Monday, February 02, 2015 1:34 PM
To: Agen, Jarrod (GOV); Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Biehl, Laura (GOV); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Walsh, John (GOV); Brownfield, Michael (GOV); Allard, Claire (GOV); Rexford, Tori (GOV)
Subject: Flint event on Tuesday
Attachments: 2 FDCVT Grant Awards draft.docx; Briefing Flint grant announcement.docx; RELEASE Flint water grants.docx

Good afternoon team,

Just wanted to touch base on Tuesday's event in Flint. Unless told otherwise, I'm continuing to prepare for the event.

I touched base with Harvey and Stacie, who recommended we proceed. Harvey is approaching some stakeholders about appearing at the event, and will forward those names to me later today.

I left a message with Dick Posthumus to see if he has any concerns about proceeding.

The Senate Democrats said Sen. Ananich will want to appear. Katie Carey from the House said she would forward information to Rep. Neeley and Phelps. I have not heard back from her yet.

I've attached the backgrounder and the draft releases from Governor's Communications and Treasury. I've sent a message to the mayor's office about a quote, but have not heard back yet.

Brad and I spoke about Director Wyant's role and potential comments. He will point out that there are things the state can do to help monitor the situation, but also will note that the city's water infrastructure is aging, which contributes to the problems.

We need some direction on an advisory. Should this be listed on a typical advisory from the governor's office, or come from Treasury? Do we even issue an advisory in favor of just contacting media directly in the morning?

Please give the draft releases a read for potential changes, or let me know of other concerns.

Thank you!

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

89 (Rev. 11-13)

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

February 3, 2015

FOR IMMEDIATE RELEASE
www.michigan.gov/treasury

Contact: Terry Stanton, Treasury
(517) 335-2167
Dave Murray, Governor
(517) 335-6397

draft

Gov. Rick Snyder announces grants helping distressed municipalities with water, public safety, appraisal issues

$8 million awarded for projects aimed at improving services, quality of life

LANSING, Mich. -- Gov. Rick Snyder today awarded $8 million to six municipalities to fund various improvement projects, including water system and street lighting enhancements and technology upgrades through the Financially Distressed Cities, Villages, and Townships Grant Program.

Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

"Municipalities receiving this special funding are some of the areas hardest hit by the Great Recession," Snyder said. "I am pleased we can offer funding assistance to help these local governments improve various public services their taxpayers and residents expect and deserve."

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

The following communities will receive funding this year, with projects and amounts noted (alphabetical order):

Local Unit	Project Description	Amount
City of Benton Harbor	Complete a property reappraisal to provide updated and accurate assessing records. Additionally, community enhancement through blight management and sidewalk replacement.	$475,000
City of Benton Harbor	Water system enhancement through water main replacements and fire hydrant repairs.	$434,960
City of Ecorse	Public safety enhancement through improved street lighting.	$350,000

City of Flint	Water system enhancement through improved waste management.	$1,100,000
City of Flint	Water system enhancement through leak detection and pipe assessments.	$900,000
City of Hamtramck	Complete a property reappraisal to provide updated and accurate assessing records.	$167,860
City of Hamtramck	Upgrade City Hall security.	$50,000
City of Hamtramck	Public safety enhancement through improved street lighting.	$404,600
City of Highland Park	Water system enhancement through meter replacement, leak detection, and system repairs.	$2,000,000
City of Inkster	Complete a property reappraisal to provide updated and accurate assessing records.	$73,460
City of Inkster	Water system enhancement through fire hydrant repairs.	$150,000
City of Inkster	Provide a backup power source for public safety.	$30,000
City of Inkster	Public safety enhancement through the creation of a multi-jurisdictional narcotic team.	$240,000
City of Inkster	Public safety enhancement through police officer training.	$41,970
City of Inkster	Public safety enhancement through the deployment of an additional police officer.	$320,000
City of Lincoln Park	Public safety enhancement through updated technology.	$143,490
City of Melvindale	Public safety enhancement through fleet replacement of police vehicles and updated technology.	$88,000
City of Pontiac	Community enhancement through blight management.	$125,000
City of River Rouge	Public safety enhancement through improved street lighting. Additionally, infrastructure replacements to City Hall.	$591,508
Royal Oak Township	Public safety enhancement through improved street lighting	$86,559
Royal Oak Township	Public safety enhancement of police services.	$217,593

Applications for the next round of Financially Distressed Cities, Villages, and Townships Grant Program will be available on the Department of Treasury website this spring. Applications must be submitted to Treasury by the close of business on XXX, XXX 31, 2015.

Preference is generally given to applicants from local units in which:

- A financial emergency has been declared in the past five years;
- An approved deficit elimination plan for the general fund is currently in place; or,
- Two or more conditions indicating "probable financial distress" currently exist.

For more information about FDCVT grants, including an application for cities, villages, and townships, visit www.michigan.gov/revenuesharing.

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*Conditions of "probable financial distress" relating solely to school districts are not included as conditions for FDCVT, as school districts are not eligible.

Briefing: Grant announcement in Flint

Tuesday, Feb. 3, 2015, 3-4 p.m.
Haskell Community Center, 2201 Forest Hills Ave. Flint
Governor's communications: Dave Murray, murrayd1@michgian.gov, 517-449-8343
DEQ communications: Brad Wurfel, wurfelb@michigan.gov, 517-230-8006
Treasury communications: Terry Stanton, stantont@michigan.gov, 517-830-5807

Purpose

The state government is providing support for the Flint government as it addresses issues with its water system. The state on Tuesday is announcing that Flint is receiving two grants totaling $2 million related to water system improvements through the Financially Distressed Cities, Villages and Townships grant program. DEQ Director Dan Wyant will address ongoing efforts with his agency to test Flint water and explain why the city is facing some of its problems. Senate Minority Leader Jim Ananich, D-Flint, will discuss his appreciation for the ongoing support for the city and its residents.

Attending

- Harvey Hollins, director of the Michigan Office of Urban Initiatives
- Dan Wyant, director of the Michigan Department of Environmental Quality
- Wayne Workman, deputy treasurer, Michigan Department of Treasury
- Jerry Ambrose, Flint emergency manager
- Dayne Walling, Flint mayor
- State Sen. Jim Ananich
- State Rep. Sheldon Neeley
- State Rep. Phil Phelps

Agenda

3:00 PM – 3:05 PM:	Harvey Hollins announces that Flint has received two grants totaling $2 million.
3:05 PM – 3:10 PM:	Dan Wyant discusses the state's ongoing role in monitoring Flint's water and any assistance that has been provided and will continue to be provided.
3:10 PM – 3:15 PM:	Mayor Dayne Walling remarks about appreciation for state assistance.
3:15 PM – 3:20 PM:	Sen. Jim Ananich remarks about appreciation for state assistance.
3:20 PM – 3:25 PM:	Rep. Neeley remarks.
3:25 PM – 3:35 PM:	Harvey Hollins closing remarks, opens floor to media questions.
3:35 PM	Event ends, though this might be optimistic.

Background

- The quality of Flint water has been a high-profile concern in recent weeks, with residents complaining about the color, taste and smell of tap water since a switch to Flint River water as a temporary source as a pipeline is built to Lake Huron as a water source starting in 2016.
    - Residents have attended meetings with jugs of brownish water.
    - U.S. Kildee has worked with labor and community groups to distribute bottled water.
- Mayor Walling has issued a letter (included below) calling for state and federal assistance for the city, including forgiveness of some $20 million in debt through the Drinking Water Revolving Loan Fund and calling for the governor to come to Flint personally.
    - Walling also submitted a guest column to the Flint Journal with similar requests.

        - He said the loan forgiveness is needed for the city to upgrade its water treatment process.
    - Governor and Mayor Walling had a telephone conversation on Friday, and the mayor has pledged to work together on solutions.

- Rep. Sheldon Neeley also has sent the governor a letter, saying that his constituents "are on the verge of civil unrest."

- The Department of Environmental Quality has been monitoring the water situation, with a detailed backgrounder and talking points attached below.

- The Treasury Department is announcing Tuesday that Flint is among the cities receiving a combined $8 million the Financially Distressed Cities, Villages and Townships grant program.
    - The announcement of the other grants will follow the Flint announcement.
        - The Flint grants are $1.1 million to allow the city to replace the functions of the old incinerator with new water pollution control facility allowing for the disposal of waste to landfills.
        - The other is $900,000 to allow the city to hire a contractor to perform a leak detection survey, which will lead to prioritizing repairs.
    - A breakdown of the grants is included below.

Treasury breakdown of Flint grants

Flint Incinerator: The grant project entails shutting down the current Water Pollution Control Facility Incinerator (due to the incinerator not being up to new EPA standards). In order to meet EPA standards, it would cost roughly $8.8M in upgrades to the current incinerator. The grant funding will allow them to replace the functions of the old incinerator by constructing new facilities which will allow for the disposal of waste to landfills.

Budget Breakdown	
Construction Contractor	$1,050,000
Project Management	$50,000
Total	$1,100,000

Flint Leak Detection: The grant project will allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity. This data will allow the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

Budget Breakdown	
Project Planning	$90,000
Mobilization of Crew to Site	$27,000
Leak Detection < 16" diameter	$378,000
Leak Detection 16" diameter or >	$270,000
Pipe Condition Assessments	$135,000
Total	$900,000

DEQ backgrounder on Flint water

Following the formal approval of Flint into the KWA in 2012, DWSD sent Flint a letter saying their contract was thereby terminated (by early 2013).

Genesee County has been using DWSD water without a contract since May 2014. But Flint took the letter to imply a water cutoff, and promptly turned to DEQ with a proposal to use the Flint River (their historic backup system).

This proposed shift was pitched primarily as a money saver. But it put the city in the business of water production, where they historically had been in the business of water transmission. DEQ approved the use of the river as a source, based on the treatment plant's past performance as a standby facility and the improvements we outlined prior to a switchover.

Several municipalities around the state use surface water supplies (rivers): Blissfield near Monroe, Manistique, and Alma to name a few.

The city completed the upgrades at the water plant the facility and DEQ approved it April 2014.

There were some initial hiccups. Last summer, there were a couple of 'boil water' notices issued. One for a water test that showed e. coli, one for a break in the water main.

The challenge to using the Flint River as a source is that the condition of the water is variable and changes with season and weather. It has substantially more organic matter than deep lake sources like Lake Huron. This organic matter is mobilized by high water events, and warm weather also can account for more organic material in the water.

The treatment of the organic matter is done with chlorine. One might conclude that the continual answer is just to use more chlorine to achieve water safety. However, at some point on the continuum, the chlorine and organic matter create TTHM – total trihalomethanes – as a byproduct. When the standard for those is exceeded over several consecutive quarters of testing, the supply is required by law to issue public notice and submit an approved plan for addressing the situation.

You'll note that this regulatory approach means TTHM testing is done quarterly. That means people who use the system are exposed to TTHM for several months before the public notice is required. It's because TTHM is a chronic health threat. Over the long term (measured in decades), continued exposure can contribute to some known health problems. If this were an immediate health threat, customers would receive immediate notification to boil their water or not use it.

Put in context, the EPA (which established the standard and the rule) estimates the existence of the TTHM standard prevents an estimated 280 bladder cancer cases each year … out of more than 330 million people who use public water supplies around the country.

It's not "nothing." State and federal law requires quarterly testing for TTHM and that the public be informed of it when the annual average of four quarters' worth of consecutive testing shows TTHM levels exceeding 80 parts per billion. Flint's results managed to exceed the annual average in three quarters, and they must develop a plan to address it.

But it's not like an eminent threat to public health. Unlike an e. Coli or even total coliform bacteria maximum contaminant level, which require immediate public notification and response and are part of daily / hourly testing of public water supplies, TTHMs pose a public health concern with chronic, long-term exposure.

It's clear the nature of the threat was communicated poorly. It's also clear that folks in Flint are concerned about other aspects of their water – taste, smell and color being among the top complaints.

The Safe Drinking Water Act requires public water supplies be tested for more than 90 regulated contaminants, including microbial contaminants. The act, and the program here in Michigan, work to ensure that water is safe to drink. The act does not regulate aesthetic values of water. Here are some factors affecting the aesthetics of water in Flint.

1. It's the Flint River. The water supplied by DWSD historically came from Lake Huron. It's softer. With hard water, you get a different flavor and feel. It's why General Motors suspended use of Flint Water – it was rusting their parts. Also, there's the 'organics' factor (discussed previously).
2. The system is old. Flint has more than 500 miles of water pipes. More than half of those pipe miles are more than 75 years old. Much of it is cast iron. Hard water can react with cast iron and exacerbates the rusty factor, which creates that brown water that angry residents were holding up in jugs for the media cameras last week. Valve failure has also been a key challenge. The system has an estimated 7,500+ valves. When they stick open or stick shut, it affects the hydraulics of the system and increase areas of stagnation. The city has a backlog of valves that need to be addressed. They've done half a dozen or so since November.
3. Flint is old. Many of the homes served by the system are old. Brown water complaints may also be attributable to cast iron pipes in customers' service connection to the city lines. The DEQ has been encouraging people with water coloration concerns to contact the city and see whether it is the service line or the City's line causing the issue. Again, discoloration is not an indicator of water quality or water safety, but we recognize that nobody likes it.

In summary, the City of Flint has tremendous need to address its water delivery system. We are not aware that they have any capital improvement funds for preventative maintenance in place, much less line replacement project monies that will require hundreds of millions.

The City was approved for a Revolving Fund loan in 2008 or 2009. As a Distressed Community, they qualified for flexible terms and 2 percent interest rate Revolving Fund Loan. After they were notified they were approved for the loan, they declined it. Previous SRF loans from the state to Flint bear an outstanding balance of $20.7 million today.

The DEQ continues working with the city to address the TTHM issue. They can take interim steps – from scrubbing the insides of transmission lines to carefully monitoring the hydraulic challenges in their system – to address customers' aesthetic concerns. Their TTHM numbers already are showing dramatic improvement; the November testing showed only one of seven sample points exceeding the standard.

The key now is that the standard is an average of three quarters' worth of results. It will be some time before they are officially "not in violation." However, depending on weather in 2015, it's not unforeseeable that we will be having this conversation again by next Christmas.

The key to the conversation is that TTHM is not a top health concern. That's key because residents need to understand TTHM in context, and it is key because it appears the mayor has seized on the public panic (sparked, frankly, by their poor communication of the violation notice) to ask the state for loan forgiveness and more money for their infrastructure improvement.

Another key thing to remember is that once the city connects to the new KWA system in 2016, this issue will fade in the rearview.

Key messages:

1. The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
2. Municipal water supplies are tested rigorously and regularly for more than 90 regulated contaminants, including microbial contaminants that pose an immediate public health concern.

3. Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.
4. TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of several decades of exposure. The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.
5. The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.
6. The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.
7. Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ.

Mayor Walling's Facebook post

Friend,

Access to clean, safe, affordable water is a basic human right.

That's why I just sent Gov. Snyder my Flint Water Improvement Plan. It focuses on the areas of safety, quality, access, investment and education. My letter urges the governor to quickly implement these ideas so that Flint's water is 100% safe.

Please contact Gov. Snyder by calling [redacted] (or by clicking here) and ask him to take action immediately to implement my plan and ensure Flint's water is safe.

My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the state and federal levels. Here is my plan:

Safety & Quality

- 100% Safety is the standard
- City of Flint releases testing data to assure safety and expands testing to households with support from the Michigan Department of Environmental Quality
- Support alternatives for those advised not to drink the water by their doctors through the Michigan Health Endowment Fund and community partners to protect the vulnerable like seniors and infants
- Bring on experienced river water treatment operational management in the City of Flint
- Require water testing data to be released quarterly by law in all Michigan communities

Access

- Announce an amnesty program for turn-ons and reduce the turn-on cost in Flint
- Develop a revised payment plan policy to allow customers to come back on to the Flint system
- New Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for customers (modeled on Federal and State energy utility programs: Low Income Home Energy Assistance Program; Michigan Energy Assistance Program; State Emergency Relief)

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State Investments
- State approves City of Flint's Distressed Cities Fund applications
- Federal and State forgiveness of payment to Drinking Water Revolving Loan Fund

- Federal and State financing for future improvements
- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

- Develop a community partnership to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information on water assistance
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

The struggle with our water has gone on for too long. The state must take action and do its part. Please ask Gov. Snyder to take action immediately to implement my plan and ensure Flint's water is safe. Thank you for your ongoing support.

Links to coverage

- Mayor, governor have 'long, productive' talk about Flint's water problems, Jan. 30
- 2,000 more gallons of water headed to Flint for giveaway, Jan. 30, 2015
- Flint emergency manager says there are two big reasons not to reconnect Detroit water, Jan. 29
- Flint Democracy Defense League plans four meetings on city's water problems, Jan. 29
- Environmentalist sends out new warnings about Flint water, NBC, Jan. 27
- Erin Brockovich says on Facebook she's prepared to come to Flint, MLive, Jan. 27
- Mott Community College not waiting for Flint to ensure safe water, MLive, Jan. 26
- Detroit water chief says she's willing to sell emergency water to Flint -- no strings attached, Jan. 26
- Mayor says governor needs to visit Flint to see water crisis first hand, MLive, Jan. 26
- Need water? Flint groups collect 600 cases, plan distribution this week, MLive, Jan. 26
- Incoming Flint water expert would have 'continual oversight' until new pipeline connected, Jan. 25
- Looking back at Flint's water problems (photo gallery), MLive, Jan. 25
- Flint water problems: Switch aimed to save $5 million -- but at what cost?, MLive, Jan. 23
- State says its already 'working diligently' on Flint's water problems, MLive, Jan. 22
- Officials say Flint water is getting better, but many residents unsatisfied, MLive, Jan. 21

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray, Governor's Office 517-335-6397 Terry Stanton, Department of Treasury 517-335-2167	<< AUTODATE >>

Gov. Rick Snyder awards Flint $2 million in Distressed Cities grants for water system infrastructure improvements

Funding to be used for leak detection, waste incinerator replacement

LANSING, Mich. – Gov. Rick Snyder today awarded Flint $2 million in grants for water system infrastructure improvements, part of an overall $8 million plan to help cities through the Financially Distressed Cities, Villages, and Townships Grant Program.

Flint is among six municipalities receiving grants through the program. The city will use the funding to detect leaks in its water lines and replace its Water Pollution Control Facility Incinerator.

"There are opportunities for the state government to assist Flint city leaders as they address issues related to the city's water system," Snyder said. "These grants will help recovering cities improve public services and infrastructure, improving the quality of life for all residents."

The grants to Flint were announced today at the Haskell Community Center by Harvey Hollins, director of the state's Office of Urban Initiatives and Wayne Workman, the state's deputy treasurer. They were joined by Dan Wyant, director of the Michigan Department of Environmental Quality, Flint Emergency Manager Jerry Ambrose, Mayor Dayne Walling, state Senate Minority Leader Jim Ananich, state Reps. Sheldon Neeley and Phil Phelps.

Flint was awarded $900,000 to allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity, allowing the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

The city also was awarded $1.1 million to shut down its current Water Pollution Control Facility incinerator and replace it with new facilities which will allow for the disposal of waste in landfills. The existing facilities are not up to federal Environmental Protection Agency standards.

Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of “probable financial stress,” as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

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From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 9:55 PM
To: Wurfel, Brad (DEQ); Stanton, Terry A. (Treasury); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Brownfield, Michael (GOV); Allard, Claire (GOV); Posthumus, Dick (GOV); Workman, Wayne (TREASURY); Wyant, Dan (DEQ); Walsh, John (GOV); Clement, Elizabeth (GOV); Muchmore, Dennis (GOV)
Cc: Wurfel, Sara (GOV); Agen, Jarrod (GOV); Biehl, Laura (GOV); Paciorek, Josh (GOV); Brown, Jessica (GOV); Rexford, Tori (GOV)
Subject: Thank you very much for your help.

I just wanted to say thank you to everyone who took part in Tuesday's grant announcement press conference in Flint.

I know that very, very busy people tore up their schedules to appear, or spent a great deal of time with me providing technical assistance and mentoring to bring everything together – even during the weekend and on a snow day. Your help is deeply appreciated!

I think the coverage looks good so far, giving us a chance to change the narrative and explain the state's proper role helping the city with this long-standing issue. Here are some of the early stories:

Governor awards Flint $2 million for troubled water system; Mayor says more is needed, MLive
$2 million in grant money coming to Flint to help with water situation, WJRT-12
Snyder grants $2 million to Flint for troubled water system, Toldeo Blade (AP story)

Thank you again,

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

From: Hollins, Harvey (GOV)
Sent: Monday, March 02, 2015 11:57 PM
To: Clayton, Stacie (GOV)
Subject: FW: Contaminated Drink Water if Flint
Attachments: CCF02282015_0002.pdf; ATT00001.htm

From: Muchmore, Dennis (GOV)
Sent: Monday, March 02, 2015 11:56:47 PM (UTC-05:00) Eastern Time (US & Canada)
To: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Fwd: Contaminated Drink Water if Flint

Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.

How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.

If we procrastinate much longer in doing something direct we'll have real trouble.

Sent from my iPhone

Begin forwarded message:

> **From:** Kelly Rossman-McKinney <krossman@truscottrossman.com>
> **Date:** March 2, 2015 at 8:26:34 AM EST
> **To:** Dennis Muchmore <muchmored@michigan.gov>
> **Subject: FW: Contaminated Drink Water if Flint**
>
> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download of this picture from the Internet.
https://sites.google.com/a/truscottrossman.com/ocit2/home/email-logo.png

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
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[redacted]
Office: (517) 487-9320
Fax: (517) 487-6060

From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
Sent: Monday, March 02, 2015 7:36 AM
To: Kelly Rossman-McKinney
Subject: Fwd: Contaminated Drink Water if Flint

Welcome to Monday. Please advise asap as to any next steps you recommend, if any.

---------- Forwarded message ----------
From: "Dayne Walling" <dwalling@cityofflint.com>
Date: Mar 2, 2015 7:29 AM
Subject: Fwd: Contaminated Drink Water if Flint
To: "Gerald Ambrose" <gambrose@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, "Peter Bade" <pbade@cityofflint.com>
Cc:

FYI:
---------- Forwarded message ----------
From: [redacted]
Date: Sat, Feb 28, 2015 at 2:09 PM
Subject: Contaminated Drink Water if Flint
To: [redacted]
Cc: "mail103@foxtv.com" <mail103@foxtv.com>, WFLT 1420 Am <wflt1420am@aol.com>, Abc12news <abc12news@abc12.com>, Wnem Desk <wnem@wnem.com>, Scot Johnson Wnem <[redacted]>, "news@wjr.com" <news@wjr.com>, "assigmentdesk@wdiv.com" <assigmentdesk@wdiv.com>, "D. Adams" <[redacted]>, fox2newsdesk@foxtv.com, "[redacted]" <[redacted]>, "[redacted]" <[redacted]> "B. Thorne" <[redacted]>, "Rev. Reggie Flynn" <[redacted]>, "wxyzdesk@wxyz.com" <wxyzdesk@wxyz.com>, "wflt1420@aol.com" <wflt1420@aol.com>, "cspacouriernews@yahoo.com" <cspacouriernews@yahoo.com>, "[redacted]" "promotion@wsmh.com" <promotion@wsmh.com>, Eric Mays <emays@cityofflint.com>, Emergency Manager <em@cityofflint.com>, Brenda Williams <brwilliams@visionmpinc.com>, [redacted] Vicky Van Buren <vvanburen@cityofflint.com>, Jackie Poplar <jpoplar@cityofflint.com>, [redacted] Wantwaz Davis <wdavis@cityofflint.com>, [redacted] "hwinford@cityofflint.com" <hwinford@cityofflint.com>, Inez Brown <ibrown@cityofflint.com>, Peter Bade <pbade@cityofflint.com>, "knelson@cityofflint.com" <knelson@cityofflint.com>, [redacted] Scott Kincaid <skincaid@cityofflint.com>, Dan Kildee <[redacted]> Gregory Eason <[redacted]>
"[redacted]
<[redacted]
<[redacted]
W[redacted]yane Walling <dwalling@cityofflint.com>, [redacted] "John W. [redacted]

[redacted]

Good Afternoon, Attorney Randall!

Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!

We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!

I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.

The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluoride/ej.html regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.

Thank you very much in advance!!

I remain.

[redacted] Concerned Resident

--
Dayne Walling
Mayor, City of Flint
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Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

Flint is largest water system in Michigan with highest TTHM problem, records show

Ron Fonger | rfonger1@mlive.com by Ron Fonger | rfonger1@mlive.com
on February 27, 2015 at 9:30 AM, updated February 27, 2015 at 1:22 PM

FLINT, MI -- When a consultant told Flint officials that they weren't alone in trying to get trihalomethanes out of a public water supply, he wasn't kidding.

But the consultant left something else out -- almost all communities with the same problem in Michigan were able to fix it before regulators cited them for violation of the federal Safe Drinking Water Act.

Flint's violation of the federal standards for excess total trihalomethanes (TTHM) -- which occur as a byproduct of disinfecting Flint River water for public consumption -- was just the fifth in the state since 2010, according to state records requested by MLive-The Flint Journal.

RELATED: **12 critical facts about TTHM, the stubborn Flint water contaminant**

Since then, public outrage has grown as the city of Flint, with the help of experts, struggles to rein in its contaminant levels while continuing to charge the highest water rates in Genesee County. Flint switched to using the Flint River as its water source in 2014.

Recent tests have shown that TTHM levels are within federal guidelines, and the city and its hired consultant -- Veolia North America -- say the water is safe to drink.

But Flint remains in violation of the Safe Drinking Water Act because previous levels of the disinfection byproduct were so high in 2014, triggering an ongoing violation.

The questionable quality of Flint water has frustrated residents such as Betty Jones, who said her water bill rise even when she uses less water because of her concerns over its quality.

"All we are doing is paying, paying paying (and you) can't drink it. You can't even take a bath in it," Jones said this week.

Persistent TTHM problems are rare in Michigan. Flint is among only three water supplies -- out of a total of 623 in the state -- that have had TTHM issues that lingered long enough to result in federal water quality violations.

The city's running average at one sampling site on Flushing Road was also the highest in the state in at least five years, state records show.

TTHM is an odorless, colorless contaminant, created when the organic material in water like leaves or dirt come into contact with a disinfectant like chlorine.

Although city, state and federal agencies warn that drinking water containing TTHM in excess of 80 parts per billion over many years may cause liver, kidney or central nervous system problems, the health risk is generally considered low and tied to continued exposure over decades.

U.S. EPA says it regulates disinfection byproducts such as TTHM "to address health risks posed by a potential association between chlorinated drinking water and cancer, particularly bladder cancer."

Bob Bowcock, a water expert who works with environmentalist Erin Brockovich, said most people shouldn't worry about drinking water with high levels of TTHM for a short period of time, but said there are reasons for concern.

"Am I worried (about drinking it) as a 50-year-old man? I'm not worried about that," Bowcock said. "What concerns me is airborne contamination, particularly for women in their third trimester" of pregnancy such as when taking a shower and mist of contaminated water is breathed in, he said.

Veolia Vice President Rob Nicholas, who last week declared Flint's water to be safe based on data from recent voluntary tests, also has called the TTHM violation "an unfortunate problem (that) you want to get ... fixed as soon as you can."

State records show most communities over the last five years have been able to do that even though more than 105 individual test results from 52 surface water supplies have tested at higher than the 80 parts per billion limit spelled out in the law.

Problems were even more frequent in Flint and for four other surface water systems, supplied by two water sources. Each of those systems had TTHM problems stubborn enough that testing sites maintained a running annual average above the limit.

The same records show:

- In addition to Flint, the Beaver Road Area Water Association, Beaver Township water system, Portsmouth Township water system, and Buena Vista Township water system have been cited for lingering TTHM problems. Nearly 99.5 percent of state water systems have not been cited for TTHM levels since 2010.

- Beaver Road Area Water Association, Beaver and Portsmouth townships are supplied by the Bay City water system through an arrangement with Bay County. Buena Vista Township, which is no longer in violation, is supplied by the city of Saginaw, which is part of the Saginaw-Midland Municipal Water Supply

Cont.

* With more than 31,000 customers, Flint is easily the largest water system in Michigan with a TTHM violation in recent years. The other communities with violations since 2010 have customer bases ranging from 525 to 8,676 people.

* The state requires 530 ground water supplies and 293 surface water supplies to monitor for TTHM in Michigan. No water supply using ground water exceeded the TTHM threshold has been reported in more than five years.

* Flint's highest running annual average of 99 parts per billion at one site was the highest of any of the violations in the state since 2010. Other averages among the violations ranged from 82 to 88.

Flint's TTHM levels have been improving, but residents can still expect another notice that the city is in violation of the Safe Drinking Water Act again in March.

That's because disinfection byproduct levels were so high last year, that at least one testing site is guaranteed to remain higher than 80 ppb of TTHM as an annual average, even if February testing shows no TTHM there.

When the city issued federal violation notices to Flint customers in early January, it triggered a substantial public outcry. There were town hall meetings about the quality of Flint water, bottled water drives and several angry marches on City Hall.

Elsewhere, TTHM violations have largely gone unnoticed.

Tom Paige, director of the Bay County Department of Water and Sewer, described reaction there as "very minimal."

"I'm not sure we even got a half-dozen calls" from the notices sent to customers of Beaver Road Area Water Association, Beaver Township and Portsmouth Township, said Paige. He said he thinks the location of some sample sites as well as the source of the system's water -- the inner Saginaw Bay -- played parts in the violations.

Like Flint, Bay County communities are in the process of securing a new source of raw water -- Lake Huron -- and are also building a new treatment plant.

Flint has been using the Flint River as its source of water since April, ending 50 years of purchasing treated Lake Huron water from the Detroit Water and Sewerage Department.

The city is a partner with Genesee County in the Karegnondi Water Authority pipeline that's under construction and expected to be completed in 2018.

A preliminary report from Veolia recommended reducing organics in Flint River water before introducing chlorine, shortening the time that the disinfectant has to react with the organics.

Longer-term improvements to the water system, including replacement of transmission pipes and valves and a study aimed at finding the worst leaks in the transmission system, are also underway or expected to start soon.

When water temperatures rise later this year, so will the risk of bacteria in water -- something that led the city to use more chlorine in treatment in 2014. TTHM is the chemical fallout from chlorine use.

City Councilman Scott Kincaid is among those who have already predicted the city will continue to have problems with water quality as long as the Flint River remains the city's source of water.

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From: Hollins, Harvey (GOV)
Sent: Tuesday, March 03, 2015 7:40 AM
To: Clayton, Stacie (GOV)
Subject: FW: Contaminated Drink Water if Flint

From: Muchmore, Dennis (GOV)
Sent: Tuesday, March 03, 2015 7:40:13 AM (UTC-05:00) Eastern Time (US & Canada)
To: Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Subject: Fwd: Contaminated Drink Water if Flint

I have become increasingly concerned about the situation in Flint and the lack of empathy for the residents. I'm not sure that buying water from Ice Mountain or Bill Young makes sense and I don't know about Meijer since they buy it from Bill or local sources and repackage. But, it would seem to me that buying some and giving it to residents who are having discoloration or smell issues would be fair and prudent until it gets ironed out. Maybe this doesn't make any sense to you and if not just chalk it up to the delirium I'm feeling from the sun and drop the idea.

Harvey feels the situation is slipping out of hand without some direct response and so does Kelly Rossman. She's talking to Beth today. I worry that swooping in may reinforce the idea that there is something wrong with the water after all. But, it seems to me that that would be small issue compared to blowing off these ministers and their concerns. Of course, we can't supply the water forever so maybe working with Wayne something can be figured out.

Begin forwarded message:

> **From:** "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
> **Date:** March 3, 2015 at 6:42:39 AM EST
> **To:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
> **Subject: Re: Contaminated Drink Water if Flint**
>
> I was going to call Mark Murray as a start. Do you have any water contacts at Ice Mtn etc i can call?
>
> Sent from my iPhone
>
> On Mar 2, 2015, at 11:56 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> > Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues

and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.

How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.

If we procrastinate much longer in doing something direct we'll have real trouble.

Sent from my iPhone

Begin forwarded message:

From: Kelly Rossman-McKinney
[redacted]<[redacted]>

Date: March 2, 2015 at 8:26:34 AM EST

To: Dennis Muchmore
<muchmored@michigan.gov<mailto:muchmored@michigan.gov>>

Subject: FW: Contaminated Drink Water if Flint

Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.

[https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo.png]

Kelly Rossman-McKinney

CEO

Truscott Rossman • truscottrossman.com<http://www.truscottrossman.com/>

Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933

200 Renaissance Center, Ste. 3160 • Detroit, MI 48243

125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

Cell: [redacted]

Office: (517) 487-9320

Fax: (517) 487-5080

From: Gerald Ambrose [mailto:gambrose@cityofflint.com]

Sent: Monday, March 02, 2015 7:36 AM

To: Kelly Rossman-McKinney

Subject: Fwd: Contaminated Drink Water if Flint

Welcome to Monday. Please advise asap as to any next steps you recommend, if any.

---------- Forwarded message ----------

From: "Dayne Walling" <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>

Date: Mar 2, 2015 7:29 AM

Subject: Fwd: Contaminated Drink Water if Flint

To: "Gerald Ambrose" <gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>, "Natasha Henderson" <nhenderson@cityofflint.com<mailto:nhenderson@cityofflint.com>>, "Peter Bade" <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>

Cc:

FYI:

---------- Forwarded message ----------

From: [redacted]

Date: Sat, Feb 28, 2015 at 2:09 PM

Subject: Contaminated Drink Water if Flint

[redacted]

Cc: "mail103@foxtv.com<mailto:mail103@foxtv.com>" <mail103@foxtv.com<mailto:mail103@foxtv.com>>, WFLT 1420 Am <wflt1420am@aol.com<mailto:wflt1420am@aol.com>>, Abc12news <abc12news@abc12.com<mailto:abc12news@abc12.com>>, Wnem Desk <wnem@wnem.com<mailto:wnem@wnem.com>>, Scot Johnson Wnem <[redacted]>, "news@wjr.com<mailto:news@wjr.com>" <news@wjr.com<mailto:news@wjr.com>>, "assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>" <assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>>, "D. Adams" <dadams5@mlive.com<mailto:dadams5@mlive.com>>, fox2newsdesk@foxtv.com<mailto:fox2newsdesk@foxtv.com>, "[redacted]" <[redacted]>,

[redacted]>", [redacted]>, "B. Thorne" [redacted]>, "Rev. Reggie Flynn" [redacted]>, "wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>" <wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>>, "wflt1420@aol.com<mailto:wflt1420@aol.com>" <wflt1420@aol.com<mailto:wflt1420@aol.com>>, "cspacouriernews@yahoo.com<mailto:cspacouriernews@yahoo.com>" <cspacouriernews@yahoo.com<mailto:cspacouriernews@yahoo.com>>, "[redacted]" [redacted]>, "promotion@wsmh.com<mailto:promotion@wsmh.com>" <promotion@wsmh.com<mailto:promotion@wsmh.com>>, Eric Mays <emays@cityofflint.com<mailto:emays@cityofflint.com>>, Emergency Manager <em@cityofflint.com<mailto:em@cityofflint.com>>, Brenda Williams [redacted]

Vicky Van Buren <vvanburen@cityofflint.com<mailto:vvanburen@cityofflint.com>>, Jackie Poplar <jpoplar@cityofflint.com<mailto:jpoplar@cityofflint.com>>, [redacted]

Wantwaz Davis <wdavis@cityofflint.com<mailto:wdavis@cityofflint.com>>, [redacted] "hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>" <hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>>, Inez Brown <ibrown@cityofflint.com<mailto:ibrown@cityofflint.com>>, Peter Bade <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>, "knelson@cityofflint.com<mailto:knelson@cityofflint.com>" <knelson@cityofflint.com<mailto:knelson@cityofflint.com>>, [redacted]

[redacted]rt

Good Afternoon, Attorney Randall!

Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!

We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!

I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.

The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluroride/ej.html<http://www.actionpa.org/fluroride/ej.html> regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.

Thank you very much in advance!!

I remain.

[redacted] Concerned Resident

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com<mailto:mayor@cityofflint.com>
www.cityofflint.com<http://www.cityofflint.com/>
follow me on twitter at http://twitter.com/mayorwalling
<CCF02282015_0002.pdf>

From: Hollins, Harvey (GOV)
Sent: Tuesday, March 03, 2015 10:04 PM
To: Clayton, Stacie (GOV)
Subject: FW: Contaminated Drink Water if Flint

From: Muchmore, Dennis (GOV)
Sent: Tuesday, March 03, 2015 10:04:16 PM (UTC-05:00) Eastern Time (US & Canada)
To: Workman, Wayne (TREASURY)
Cc: Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
Subject: Re: Contaminated Drink Water if Flint

No question although the city could use a little positive publicity right now.

On Mar 3, 2015, at 11:57 AM, Workman, Wayne (TREASURY) <WorkmanW@michigan.gov> wrote:

> If this does happen, we need to figure who would hand out the water. It should not be the City. It would undercut every point they are making. It probably should also be reserved for people who can't afford to buy water.
>
> ---
>
> **From:** Muchmore, Dennis (GOV)
> **Sent:** Monday, March 02, 2015 11:57 PM
> **To:** Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Agen, Jarrod (GOV); Hollins, Harvey (GOV)
> **Subject:** Fwd: Contaminated Drink Water if Flint
>
> Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.
>
> How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.
>
> If we procrastinate much longer in doing something direct we'll have real trouble.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** Kelly Rossman-McKinney <[redacted]
> **Date:** March 2, 2015 at 8:26:34 AM EST
> **To:** Dennis Muchmore <muchmored@michigan.gov>
> **Subject: FW: Contaminated Drink Water if Flint**

Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download this picture from the Internet.
https://sites.google.com/a/truscottrossman.com/ext17/home/email-logo.png

Kelly Rossman-McKinney
CEO
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Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

[redacted]
Office: (517) 487-9320
Fax: (517) 487-5060

From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
Sent: Monday, March 02, 2015 7:36 AM
To: Kelly Rossman-McKinney
Subject: Fwd: Contaminated Drink Water if Flint

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Subject: Fwd: Contaminated Drink Water if Flint
To: "Gerald Ambrose" <gambrose@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, "Peter Bade" <pbade@cityofflint.com>
Cc:

FYI:
---------- Forwarded message ----------
[redacted]
Date: Sat, Feb 28, 2015 at 2:09 PM
Subject: Contaminated Drink Water if Flint
[redacted]
Cc: "mail103@foxtv.com" <mail103@foxtv.com>, WFLT 1420 Am <wflt1420am@aol.com>, Abc12news <abc12news@abc12.com>, Wnem Desk <wnem@wnem.com>, Scot Johnson Wnem <[redacted]> "news@wjr.com" <news@wjr.com>, "assigmentdesk@wdiv.com" <assigmentdesk@wdiv.com>, "D. Adams" <dadams5@mlive.com>, fox2newsdesk@foxtv.com, "[redacted]", "[redacted]" <[redacted]>"B. Thorne" <[redacted]>, "Rev. Reggie Flynn" <[redacted]>, "wxyzdesk@wxyz.com" <wxyzdesk@wxyz.com>, "wflt1420@aol.com" <wflt1420@aol.com>, "cspacouriernews@yahoo.com" <cspacouriernews@yahoo.com>, [redacted]

"promotion@wsmh.com" <promotion@wsmh.com>, Eric Mays <emays@cityofflint.com>, Emergency Manager <em@cityofflint.com>, Brenda Williams <brwilliams@visionmpinc.com> [redacted] Vicky Van Buren <vvanburen@cityofflint.com>, Jackie Poplar <jpoplar@cityofflint.com>, [redacted] "hwinford@cityofflint.com" <hwinford@cityofflint.com>, Inez Brown <ibrown@cityofflint.com>, Peter Bade <pbade@cityofflint.com>, "knelson@cityofflint.com" <knelson@cityofflint.com>, [redacted] "rfonger1@mlive.com" <rfonger1@mlive.com>, [redacted] Dyane Walling <dwalling@cityofflint.com>, [redacted]

Good Afternoon, Attorney Randall!

Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!

We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!

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The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluoride/ej.html regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.

Thank you very much in advance!!

I remain.

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Steve Linder [slinder@sterlingcorporation.com]
Sent: Wednesday, March 04, 2015 5:06 PM
To: Clayton, Stacie (GOV)
Subject: Re: Flint Water Meeting

Thank you so much Stacie. We are confirmed. I will get you information on the company and the process tomorrow sometime.

Sent from my iPhone
Stephen Linder
Sterling Corporation
(517)267-9012 (O)
[redacted]

On Mar 4, 2015, at 5:04 PM, Clayton, Stacie (GOV) <claytons3@michigan.gov> wrote:

> Mr. Linder,
>
> This email is to confirm the meeting on Monday, March 9, at 1pm at your office in the Hollister Building in Lansing regarding Flint water. As of now, I have Harvey Hollins of the Governor's Office and Gerald Ambrose, Flint EM, confirmed to attend. We also will have someone from Flint Water and Michigan's DEQ in attendance. I'll send those names when they are identified.
>
> In the meantime, please respond via email your receipt of this message and let me know if there is anything more you will need.
>
> Thank you,
> Stacie
>
> ***Stacie Clayton, Assistant Director***
> Harvey Hollins III, Director
> Governor's Office of Urban and Metropolitan Initiatives
> 3044 West Grand Boulevard, Ste. 14-650
> Detroit, MI 48202
> 313.456.4994 (office)
> claytons3@michigan.gov

From: Muchmore, Dennis (GOV)
Sent: Wednesday, August 05, 2015 9:04 AM
To: Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: RE: '20150804_Meeting with Flint's Clean Water Coalition'

I didn't think that meeting was as useful as others. If people won't accept the factual information, I'm not sure there is much we can do about it. They're getting their own filters, we've installed six at the main and I thought there were six more coming. As for the flushing, that's part of any city's water system, and people in every community pay for it. As to the frequency, there must be a plan to reduce the number of times.

Questions:
Why does KWA only produce 18 million gals? Doesn't make sense to have a system that doesn't produce enough water. Where do they expect to get the other from? Especially since GM doesn't want the Flint river water (even though presumably GM has been both the biggest commercial user and disposer), how do they separate out the flow?

We can't do too many more of these. The three activists in the room just want to be right, they don't want answers. No matter what we say they'll always want something else to be the answer. The Pastors and the woman form yesterday who usually sits across from me and who always lectures us (that's just a reminder of some of the old time negative racial experiences she's had and I get it) are really a strong group of people. Usually there is a black woman who comes with them, but I missed her yesterday. I really her and of course, Overton and Hill are pretty impressive people in their own right.

From: Hollins, Harvey (GOV)
Sent: Wednesday, August 5, 2015 8:32 AM
To: Muchmore, Dennis (GOV)
Cc: Clayton, Stacie (GOV)
Subject: '20150804_Meeting with Flint's Clean Water Coalition'

From: Adamczyk, Lynne (GOV)
Sent: Wednesday, September 16, 2015 3:19 PM
To: Clayton, Stacie (GOV); Kennedy, Jordan (GOV); Rospond, Laurie (GOV); Brown, Eric (GOV); Dempkowski, Angela (Treasury); Pleyte, Beth (Treasury); Wurfel, Brad (DEQ); Pallone, Maggie (DEQ); Grijalva, Nancy (DCH); Thelen, Mary Beth (DEQ); Doyle, Maureen (Treasury); Minix, Connie (DTMB)
Subject: Document for Review - Flint Water Plan Support
Attachments: Additional Support for Flint Water Improvement Plan, 9.14.15.pdf

Stacie, please have Harvey respond to this letter from Mayor Walling and send me a copy of the response letter.

Thanks,

Lynne

Lynne Adamczyk
Executive Assistant
Office of Governor Rick Snyder
517-373-3400 (o)
[redacted]
adamczykl@michigan.gov

CITY OF FLINT

Dayne Walling
Mayor

September 14, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Call for Additional Support for Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing with a renewed request for additional support to address Flint's water challenges to ensure that water is affordable and secure for everyone in Flint especially our vulnerable populations. I am asking for an additional $30 million in funds for Flint's infrastructure and a new healthy homes initiative.

Significant progress has been made throughout this year to increase water safety and quality and I thank you for the involvement of your office, the Michigan Department of Environmental Quality, and the Michigan Department of Treasury. A majority of items in the Water Improvement Plan are completed or underway. Most importantly, Flint is now in compliance with the Safe Drinking Water Act due in large part to the installation of the new carbon filter. The infrastructure systems are being made more secure and efficient through the State grants. Now the City is committed to following the recommendation of the Michigan Department of Environmental Quality to optimize the treatment process, reduce corrosion and further minimize risks from lead.

The need to accelerate the City's capital improvement investments remains and has been further increased by the continued financial stress and legal issues. Previously I requested support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community and the gap in funding in the adopted capital improvement plan. I understand that the existing federal law does not allow the existing Drinking Water Revolving Loans that Flint is carrying to be forgiven in retrospect but the need still exists. Flint owes approximately $20 Million. One solution is for the State to grant a new $20 Million that is designed as forgivable from the start. Another solution is to provide

City of Flint • 1101 S. Saginaw Street • Flint, Michigan 48502
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equivalent funding through an expansion of the grant program to Michigan's Financially Distressed Cities, Villages and Townships with a supplemental budget amendment in cooperation with the State Legislature.

The community's heightened concern about lead leeching into the water from old service lines and home plumbing also needs to be addressed. We know that lead is an environmental contaminant and there have been many programs in place over the years to address sources in paint and pipes. Flint needs a new healthy homes initiative specifically focused on lead in water with $10 Million to start the process of replacing service lines for the most vulnerable households. Regardless of the source and treatment of Flint's water, this long term threat of lead in pipes needs to be removed in the interest of public health.

My approach continues to be to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and State and Federal government personnel. We need every available expert and resource to address Flint's water problems.

Flint's safety is my top priority. Just as the City and State have worked together on public safety, we need additional support for fixing the water problems. We need $30 Million in new funds to repair and update the city-wide infrastructure and to assist households in becoming lead-free. The entire Flint community deserves sustainable, safe, secure and affordable water now and into the future. Thank you for the consideration Governor and I look forward to future discussions.

Sincerely,

Dayne Walling
Mayor, City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; EPA Regional Administrator Dr. Susan Hedman; Chief of Staff Dennis Muchmore

From: Wisniewski, Wendy (GOV)
Sent: Thursday, September 17, 2015 11:22 AM
To: Clayton, Stacie (GOV)
Cc: Mcbride, Bill (GOV); Adamczyk, Lynne (GOV); Muchmore, Dennis (GOV)
Subject: FW: Document for Review - Flint Water Plan Support
Attachments: Additional Support for Flint Water Improvement Plan, 9.14.15.pdf; ATT00001.htm

Stacie – I'm sorry for the confusion – Dennis would like to review any response that is drafted but I assume that this letter and any response is one of the things being discussed on tomorrow morning's conference call with everyone.

From: "Adamczyk, Lynne (GOV)" <adamczykl@michigan.gov>
Date: September 16, 2015 at 3:19:18 PM EDT
To: "Clayton, Stacie (GOV)" <claytons3@michigan.gov>, "Kennedy, Jordan (GOV)" <KennedyJ4@michigan.gov>, "Rospond, Laurie (GOV)" <rospondl@michigan.gov>, "Brown, Eric (GOV)" <BrownE15@michigan.gov>, "Dempkowski, Angela (Treasury)" <DempkowskiA@michigan.gov>, "Pleyte, Beth (Treasury)" <PleyteB@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Pallone, Maggie (DEQ)" <PalloneM@michigan.gov>, "Grijalva, Nancy (DCH)" <GrijalvaN@michigan.gov>, "Thelen, Mary Beth (DEQ)" <THELENM2@michigan.gov>, "Doyle, Maureen (Treasury)" <DoyleM4@michigan.gov>, "Minix, Connie (DTMB)" <minixc@michigan.gov>
Subject: Document for Review - Flint Water Plan Support

Stacie, please have Harvey respond to this letter from Mayor Walling and send me a copy of the response letter.

Thanks,

Lynne

Lynne Adamczyk
Executive Assistant
Office of Governor Rick Snyder
517-373-3400 (o)
[redacted]
adamczykl@michigan.gov

CITY OF FLINT

Dayne Walling
Mayor

September 14, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Call for Additional Support for Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing with a renewed request for additional support to address Flint's water challenges to ensure that water is affordable and secure for everyone in Flint especially our vulnerable populations. I am asking for an additional $30 million in funds for Flint's infrastructure and a new healthy homes initiative.

Significant progress has been made throughout this year to increase water safety and quality and I thank you for the involvement of your office, the Michigan Department of Environmental Quality, and the Michigan Department of Treasury. A majority of items in the Water Improvement Plan are completed or underway. Most importantly, Flint is now in compliance with the Safe Drinking Water Act due in large part to the installation of the new carbon filter. The infrastructure systems are being made more secure and efficient through the State grants. Now the City is committed to following the recommendation of the Michigan Department of Environmental Quality to optimize the treatment process, reduce corrosion and further minimize risks from lead.

The need to accelerate the City's capital improvement investments remains and has been further increased by the continued financial stress and legal issues. Previously I requested support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community and the gap in funding in the adopted capital improvement plan. I understand that the existing federal law does not allow the existing Drinking Water Revolving Loans that Flint is carrying to be forgiven in retrospect but the need still exists. Flint owes approximately $20 Million. One solution is for the State to grant a new $20 Million that is designed as forgivable from the start. Another solution is to provide

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equivalent funding through an expansion of the grant program to Michigan's Financially Distressed Cities, Villages and Townships with a supplemental budget amendment in cooperation with the State Legislature.

The community's heightened concern about lead leeching into the water from old service lines and home plumbing also needs to be addressed. We know that lead is an environmental contaminant and there have been many programs in place over the years to address sources in paint and pipes. Flint needs a new healthy homes initiative specifically focused on lead in water with $10 Million to start the process of replacing service lines for the most vulnerable households. Regardless of the source and treatment of Flint's water, this long term threat of lead in pipes needs to be removed in the interest of public health.

My approach continues to be to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and State and Federal government personnel. We need every available expert and resource to address Flint's water problems.

Flint's safety is my top priority. Just as the City and State have worked together on public safety, we need additional support for fixing the water problems. We need $30 Million in new funds to repair and update the city-wide infrastructure and to assist households in becoming lead-free. The entire Flint community deserves sustainable, safe, secure and affordable water now and into the future. Thank you for the consideration Governor and I look forward to future discussions.

Sincerely,

Dayne Walling
Mayor, City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; EPA Regional Administrator Dr. Susan Hedman; Chief of Staff Dennis Muchmore

From: Clayton, Stacie (GOV)
Sent: Wednesday, March 04, 2015 5:25 PM
To: Wyant, Dan (DEQ)
Cc: Thelen, Mary Beth (DEQ)
Subject: Meeting on March 9

Director Wyant,

Harvey Hollins is requesting a DEQ technical person attend a meeting on Monday, March 9, at 1pm. The meeting will take place in the offices of the Sterling Corporation in the Hollister Building, 106 W. Allegan, Suite 2, Lansing, MI, and its purpose is regarding a possible solution for the Flint Water matter. Also in attendance will be Flint EM Gerald Ambrose and a Flint Water representative.

Additionally, I will have more you background information by Friday morning.

Thank you,
Stacie

Stacie Clayton, Assistant Director
Harvey Hollins III, Director
Governor's Office of Urban and Metropolitan Initiatives
3044 West Grand Boulevard, Ste. 14-650
Detroit, MI 48202
313.456.4994 (office)
claytons3@michigan.gov

From: Anderson, Madhu (DEQ)
Sent: Wednesday, November 25, 2015 2:07 PM
To: Chris Kolb; Ken Sikkema (ksikkema@pscinc.com); [redacted]
Cc: Baird, Richard (GOV); Wyant, Dan (DEQ); Weber, Travis (GOV)
Subject: Follow up Information
Attachments: 18-Point Partnering Plan 11-23-15.pdf; Flint Water FY 2016 Supplemental Budget Request.pdf; Taking Action on Flint Water.pdf

All - During the phone call yesterday with the Flint Water Task Force, Chris Kolb asked for the information about the ongoing activities in Flint. Please find attached the following materials:

- DEQ's Partnering Plan
- FY 2016 SOM Supplemental Budget Request for Flint Water – authorized by the State Legislature on October 15, 2015.
- Taking Action on Flint Water Brochure

Director Wyant and our Flint Action team are available to meet with you at your convenience to give you more details on the ongoing activities and outreach in Flint .

Have a wonderful Thanksgiving,

Madhu R. Anderson
Deputy Director, Economic and Strategic Initiatives
☎ 517 284 6702 | [redacted]
andersonm30@michigan.gov

DEQ

Department of Environmental Quality
18-Point Partnering Plan

1. **After Action Plan Frequently Asked Questions will be ready by noon on November 16, 2015**

   - First version complete – updated as needed

2. **School test data**

   - School reports to be expedited
   - Steve Busch creates summary reports
   - George Krisztian creates summary spreadsheets

3. **Blood exposure**

   - DHHS is lead on providing data

4. **Meeting with Mayor Karen Weaver**

   - Harvey Hollins lead – Dan Wyant, Jim Sygo, and George Krisztian to attend

5. **Messaging our Partnering Plan**

   - Provide ongoing public updates regarding Governor's 10-point plan
   - Continue emphasis on the availability of free testing for Flint residents
   - DEQ's Office of Environmental Assistance to direct the public to the Flint water Web site: www.mi.gov/flintwater

6. **Sampling Protocol**

   - Establish alignment with the U.S. Environmental Protection Agency (EPA), Region 5, on sampling protocol

7. **Lead service line replacement**

   - Expand the Revolving Loan Fund directed at lead service line replacement
   - Amy Epkey, Maggie Pallone, and Sonya Butler

8. Partner with EPA

- Dan Wyant → Susan Hedman
- Jim Sygo → Bob Kaplan
- Mike Prysby and Steve Busch → Darren Lytle and Mike Schock
- George Krisztian → Tom Burke
- DEQ's Office of Drinking Water and Municipal Assistance (ODWMA) staff → EPA, Region 5, staff (Jennifer Crooks and Tom Poy)

9. Meet with Charles Stewart Mott Foundation to discuss Lead Service Line Identification Study

10. Lead Education Program

- DHHS is the lead on Lead Education Program

11. Moving Karegnondi Water Authority (KWA) forward

- Proactive meetings with KWA

12. Participate actively with Flint Technical Advisory Council

13. Utilize Joan Rose and Michigan State University water expertise

14. Public outreach

- Flint Mayor Karen Weaver
- Genesee County Health Department
- Drs. Lawrence Reynolds, Eden Wells, and Matthew Davis
- Ministers
- Land Bank
- Legislators
- Citizens

15. Outreach to schools

- EPA guidance on testing
- Work with State Superintendent Brian Whiston
- ODWMA staff to work on literature

16. Make recommendations to EPA about Lead and Copper Rule

17. Compliance Communication letter sent on November 9, 2015

- Wait until after December 30, 2015

18. Enhance coordination with health officials regarding personal health notifications of drinking water issues

Flint Water FY 2016 Supplemental Budget Request

1. $1 Million for Filters

The $1 million for filters will be used to purchase filters for households in Flint that do not qualify for assistance under any of the DHHS assistance programs. Filters for those residents will be paid for out of funding already in place in DHHS' budget. Each filter is $20 and they were ordered in bulk through Home Depot. Filters are being distributed through local public health departments, with documentation filed for each filter handed out.

2. $6 Million for switch from Flint River to DWSD

The City of Flint estimates it will cost the City an additional $1.3 million per month to use DWSD instead of the Flint River. The State and the City agreed to split the cost through June 2016, when the new Karegnondi Water Authority will be completed and Flint will switch to that water source. ($1.3 million for 9 months)

3. $1.35 Million for resources to do community Lead Exposure Testing

DEQ, DHHS and LARA are assembling a team to go into schools, childcare facilities, and other high lead exposure health risk locations to test and follow up on lead exposure.

4. $1 Million for evaluating sample results at the State Lab

The new testing protocols for schools will require each faucet in the school to be tested and evaluated at the State lab. In addition, lead exposure testing in homes will result in tens of thousands more samples that will be need to processed. Each sample costs $26 to process.

Total Ask: $9.35 Million, $7.15 GF

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Immediately test all Flint public schools to ensure that **drinking water is safe**. Testing will also be available at no cost to any other school in Flint.
- **Expand health exposure testing** of individual residences.
- **Offer water testing** at no cost to Flint residents to assure water is safe.
- **Expedite optimizing corrosion controls** in the Flint drinking water system.
- **Assemble the "Safe Drinking Water Technical Advisory Committee"** to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.
- **Accelerate water system improvements** to address replacement of lead service lines.
- Expedite completion of **Karegnondi Water Authority**.
- Gov. Rick Snyder names Dr. Eden Wells as the Flint Drinking Water Public Health Advisor to ensure safe drinking water.
- **Provide water filters** to residents of Flint.
- Expand a comprehensive lead education initiative.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1

Visit **www.mi.gov/FlintWater** for more information

From: Stibitz, Brom (Treasury)
Sent: Friday, April 26, 2013 4:51 PM
To: Muchmore, Dennis (GOV); Roberts, John (GOV); Dillon, Andy (Treasury)
Cc: Buhs, Caleb (GOV); Wurfel, Sara (GOV); Stanton, Terry A. (Treasury)
Subject: Flint/DWSD
Attachments: Kevyn Orr - April 26, 2013.pdf

Ed Kurtz and Kevyn Orr spoke this afternoon. Ed indicated that Flint will not accept the last offer from DWSD. His formal letter is attached.

I spoke with both (separately) after the call. They both indicated that they had a good conversation, and that they sincerely look forward to working with the other in good faith over the next couple years.

Kevyn indicated that he would follow up with Sue McCormack, and that his direction will be that there be no more talking to the press about the issue. Ed plans to stay silent on the deal until Monday, at which time he will address the issue in a matter of fact matter, and stay away from any divisive language regarding the issue.

Brom Stibitz
Senior Policy Advisor
Michigan Department of Treasury
517-373-3223
stibitzb@michigan.gov

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
EDWARD J. KURTZ

ELECTRONIC LETTER

April 26, 2013

Mr. Kevyn Orr
Emergency Manager
Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 1126
Detroit, MI 48226

RE: DWSD Offer Evaluation

Dear Mr. Orr:

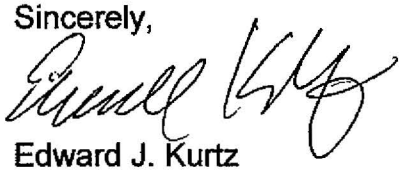
DWSD's offer of a Public/Public Partnership appears on the surface to offer significant cost of water savings, particularly in the near-term. However, further analysis exposes several flaws and weaknesses with the offer that reduce any potential appeal. First, the offer continues to use a grossly inaccurate estimate of the KWA operating and capital costs over the next thirty years. This one estimate is off by at least $800 million and perhaps by as much as $1 billion over that timeframe. And since DWSD claims "total savings to the Flint region are over $900 million", they have relied on this flawed estimate of KWA cost to make this claim. This offer also relies on a projection based on very little capital expenditures, no repairs on a system that is past its life expectancy, and annual rate increases of 4.7% over the next 30 years.

Secondly, and of much greater concern to Flint and GCDC, DWSD's offer of partnership would not so much foster a true collaborative relationship, but instead contractually transfers significant liability and risk for the next thirty years. DWSD's offer states the contract "would reflect more input into and control over system investments and cost variables." Unfortunately, these future investments and cost variables are not contained in the DWSD cost estimates. DWSD has included a fixed monthly charge to recover allocated capital revenue requirements, but this number is largely for past expenditures and debt costs, and does not include the significant future capital costs which will be required to maintain their nearly 50 year-old system. Once again quoting from the

DWSD April 24th offer letter under the Rate Increase Guarantee section – "DWSD proposes a guarantee that the capital portion of the Lake Huron System rate structure (the fixed monthly charge) will not increase for the life of the contract, unless additional capital investment is made in current and future Lake Huron System facilities." No one disputes that additional capital costs will be required that will total in the millions of dollars.

The DWSD offer is able to appear to offer savings on the surface since they have offloaded much of the above future capital costs. But to do so, DWSD has had to gloss over or simply ignore these large future expenditures. If these unaccounted for capital costs were to be calculated and added to the 30 year Flint and GCDC cost of water estimates, the DWSD offer becomes one in which the savings swing far to the advantage of the Karegnondi Water Authority.

Sincerely,



Edward J. Kurtz

ATTACHMENT 1

This offer has more risk involved than previous proposals. KWA would be responsible for between 20% and 100% of the repair costs on the pipeline and related assets from Port Huron

The numbers in the offer do not make sense. DWSD indicates savings of over $900 million while KWA's total cost over 30 years is less than $650 million.

Offer is based on very little capital improvements, no repairs and a 4.7% annual increase over the life of the contract.

There are no rate guarantees after the first year for capital, O & M or consumption.

KWA would be responsible for redundancy at a cost of $94.68 million per DWSD's estimate.

Does not guarantee a rate structure if system regionalizes or DWSD regionalizes, or Detroit enters bankruptcy.

Flint and Genesee County could have a connected waste/water system that serves all or part of five counties.

The potential for further consolidation of services between the city and the county i.e...water, wastewater, 911, etc,

This partnership will give Flint ownership of its own water supply system with real representation on its board of directors, making all treatment and delivery system decisions.

Flint's participation allows them to utilize its own water treatment facility that it has invested 50 million into and only currently exercises four days per year.

The investment gives us a new pipeline with a life expectancy of 75 years, as well as a 2nd product, untreated water. Under DWSD we would have no ownership after the end of the contract, and a new pipeline would still need to be built.

A 30 year contract with DWSD keeps us on a system that is 48 years old with a design life of 75 years. There will be necessary major investments or replacement costs that are not accounted for in this DWSD proposal.

KWA guarantees its capitol rate for 25 years. The capitol rate is 90 % of the total costs.

The commodity charge of $1.30 per mcf is mainly driven by energy costs. The whole operation will employ 5-7 people.

A thirty year contract with DWSD will lock Flint into hundreds of employees, labor costs and legacy costs.

The combination of low financing, labor and material make this the optimal time for this investment. At our meeting with the governor on April 19th Detroit acknowledged a second pipeline had to be built.

KWA could be used as a backup emergency supply for the existing 48 year old pipeline.

It brings a total economic package to our community i.e. We have the I-69 corridor, I-75 interchange, the rail system connected to Port Huron, and one of the busiest airports in the state. Owning our own water supply completes that package and keeps $25 million in our community.

Mr. Fausone's continued insistence on a 12 month timeline to calculate the termination fees leaves a question mark on the costs.

Construction Costs

- Rowe/AECOM/J & H $272,000,000
- TYJT $357,000,000

  Include: 10% bond coverage (dispelled)

  30% additional engineering (dispelled)

  Back-up power (dispelled)

- DWSD Starts at: $357,000,000 and adds:

  $134,630,000 for bond sizing

  $11,074,500 for bond sale cost

  For a total of: $503,274,500

  Plus need to collect $6,984,000 per year extra for bond coverage (20%)

  Now we need:

  20% bond coverage

  30% additional engineering

  38% bond sizing

We dispelled TYJT numbers; now DWSD starts with those numbers and adds more

They add the same costs to Flint and GCDC construction costs (baseline figures and assumptions – KWA)

Baseline Figures and Assumptions - KWA Scenario

	DWSD Water Rate Structure			
	Fixed	Standby	Commodity	
2014	738,006	#N/A	13.01	Service ceases after 2016

Total Water Service Costs for Flint / Genesee County Drain Commission

Costs of Current Facilities / Operations

Same as DWSD scenario

Costs of Future Facilities / Operations

Financing Costs for New Projects	Flint WTP Improvements	GCDC WTP and Other	KWA System (a)
Project Cost	7,100,000	110,038,554	357,578,060
Bond Sizing Factor	37.65%	37.65%	37.65%
Additional Bond Proceeds Needed	2,670,000	41,430,000	134,630,000
Bond Sale Size	9,800,000	151,500,000	492,200,000
Bond Issuance Expenses - %	2.25%	2.25%	2.25%
Bond Issuance Expenses	220,500	3,408,800	11,074,500
Finance Rate	5.00%	5.00%	5.00%
Finance Term	25	25	25
Bond Reserve Size - %	10.00%	10.00%	10.00%
Bond Reserve Size	980,000	15,150,000	49,220,000
Capitalized Interest term - years	3	3	3
Capitalized Interest	1,470,000	22,725,000	73,830,000
Net Bond Proceeds	7,129,500	110,216,200	358,075,500
Annual Debt Service Payment	695,300	10,749,300	34,922,800
Debt Service Coverage Requirement	120.00%	120.00%	120.00%
Annual Debt Service Coverage	139,100	2,149,900	6,984,600
Replacement?	144,900	2,251,600	(b)
Total Capital Financing Revenue Req't	979,300	15,150,800	41,907,400
Operating Cost Estimate Starting in FY 2017	8,270,000	1,819,900	(c)

(a) excludes raw water reservoir
(b) assume no annual replacement required for pipeline
(c) $1.30 per Mcf inflated to 2017

From: Jason Lorenz [jlorenz@cityofflint.com]
Sent: Friday, October 18, 2013 10:39 AM
Subject: Press Release: EM Statement on Water
Attachments: Earley Statement on Water.pdf; WaterPres053112.PDF; Cost Comparison. KWA v DWSD.pdf

The attached release contains an official statement from Emergency Manager Darnell Earley regarding water issues.

Also attached are the water presentation from May, 2012 and the cost comparison report of KWA & DWSD from October, 2012 that were referenced in today's EM press briefing.

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039
jlorenz@cityofflint.com

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

For Immediate Release

Emergency Manager Darnell Earley Committed to Increased Transparency and Detailed Information on Water Rates

Flint, Michigan – October 18, 2013 –Flint Emergency Manager Darnell Earley has today announced that the City of Flint's water issues will be one of his key concerns in his new role and a top priority for his team. With the major decision to join the Karegnondi Water Authority made and the beginning of construction on the water intake and pipeline approaching, Mr. Earley expressed his commitment to thoroughly reviewing and assessing the scope of the issues in the following statement:

"Good management can only be accomplished with a careful examination of the facts; I want my efforts to reflect data driven decisions made with the most accurate information obtainable. As I said when I arrived, I will be making the areas of most concern to Flint residents my top priorities; the future of Flint's water supply, water system and the cost of operation and maintenance are as important to Flint residents as public safety or any other major obligations of a full service city such as Flint.

–CONTINUE–

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY

I also want to be transparent in what we glean from this exercise; through this initiative I will keep the public as informed on the process as I am as we go forth. It is for that reason that I plan to examine this issue with the help of an independent, third party consultant in order make a fair and impartial assessment. The goal of this assessment is to ensure that the long term costs of the KWA decision are accurately and openly reflected in the water rates charged to residents and businesses.

Water prices are a key concern to Flint water users, so as we look forward we want to provide them with an understanding of how they are set and to inform residents of available assistance. We currently have a poverty exemption for a portion of water and sewer charges available to low income homeowners and a lowered water deposit for low income renters. The City of Flint has done all that it can in the short term to ease the burden of water increases. Now is the time to look to the future; we want to ensure that our residents get the best possible service at the best cost through a sustainable system and a process that is self supporting for decades to come."

-Darnell Earley
Flint Emergency Manager

–END–

City Hall
1101 S. Saginaw Street - Flint, Michigan 48502
810-766-7346 FAX: 810-766-7218 www.cityofflint.com

City of Flint

Water Forum

5/30/2012

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Improvements for City of Flint Water System 13

City Of Flint Water History Facts

Current Treatment Plant was put into service in 1954.

Current 72" main pipeline was completed in 1970.

Flint signed a 30 year contract with Detroit water and Sewer Department in the mid 1960's.

The contract with DWSD has expired and we are currently operating on a yearly extension.

In 2006 Flint completed a $48,000,000 upgrade of the existing Water Plant. (Required by the MDEQ & for backup only).

Flint's Water & Sewer System is approximately a 300,000,000 Enterprise.

Flint's Water & Sewer System is designed to deliver water to over 200,000 people with over 1,500 miles of infrastructure.

Flint's most recent census count shows a population of approximately 102,000 in 2010.

Flint's census population in 2000 was approximately 124,000.

The water system had over 45,000 customers in June of 1999.

The water system had just over 36,000 customers by June 2011.

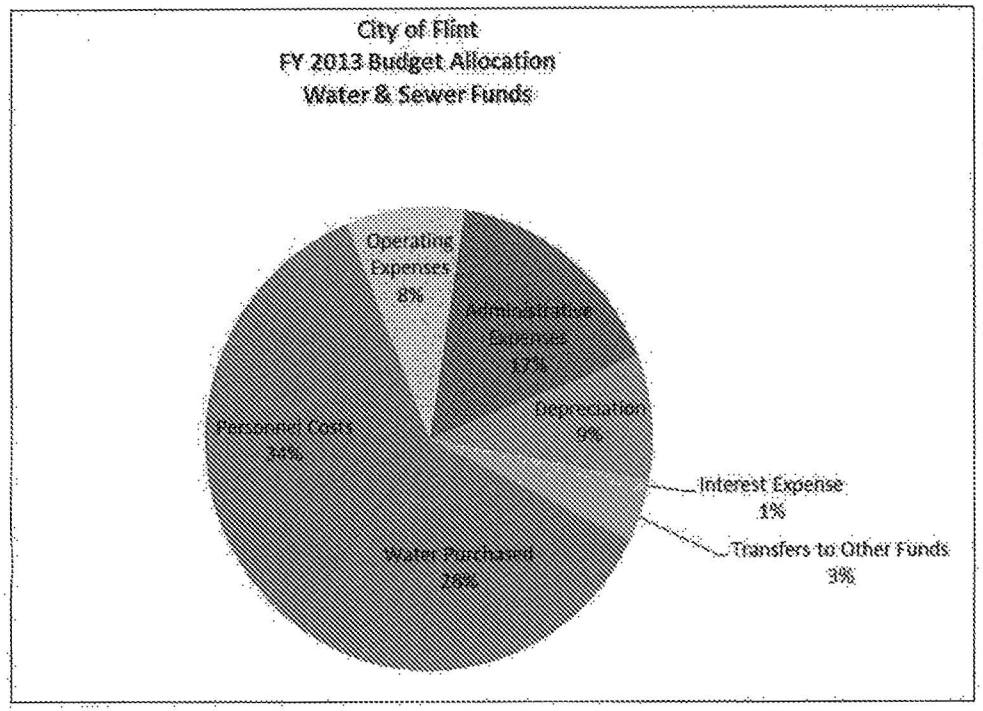
The "Fixed Costs" that must be covered to maintain the system and deliver quality water have increased over time.

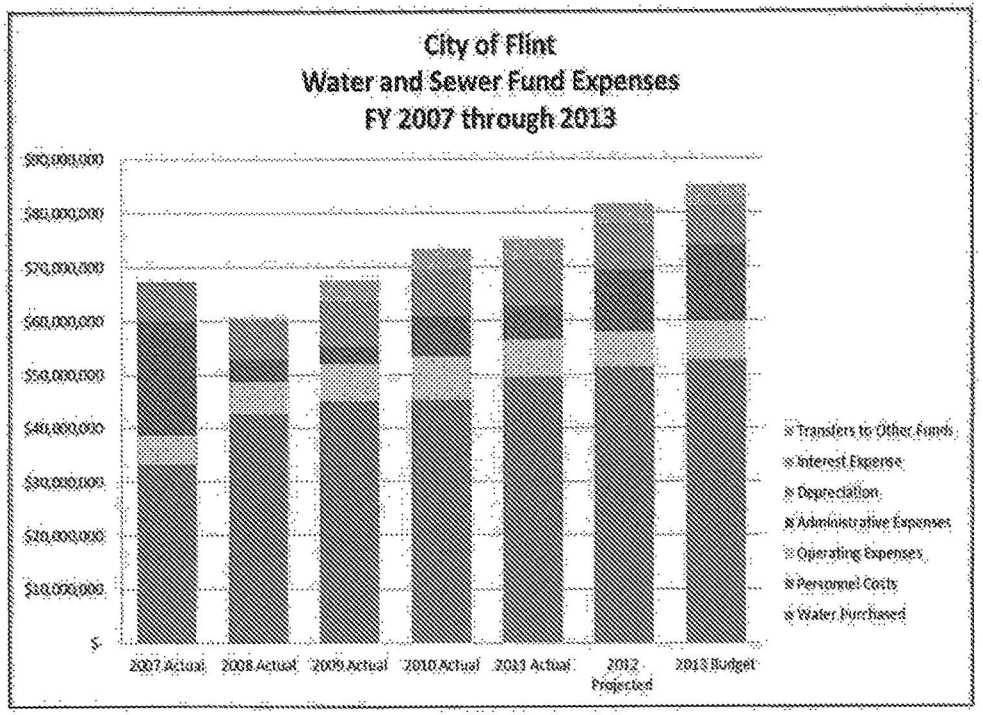
City Of Flint
Most Frequently Asked Questions about Water

- ❑Why are the water rates so high ?
- ❑How does my water bill work (Explanation of charges) ?
- ❑Why do others in the area pay less for the same amount of water ?
- ❑Where has all of the water and sewer fund money gone ?
- ❑What do I do if I think my bill is incorrect ?
- ❑What effect does leakage or theft have on my bill ?
- ❑How can I report water theft ?
- ❑Why don't we go back to using the Flint River like we once did ?

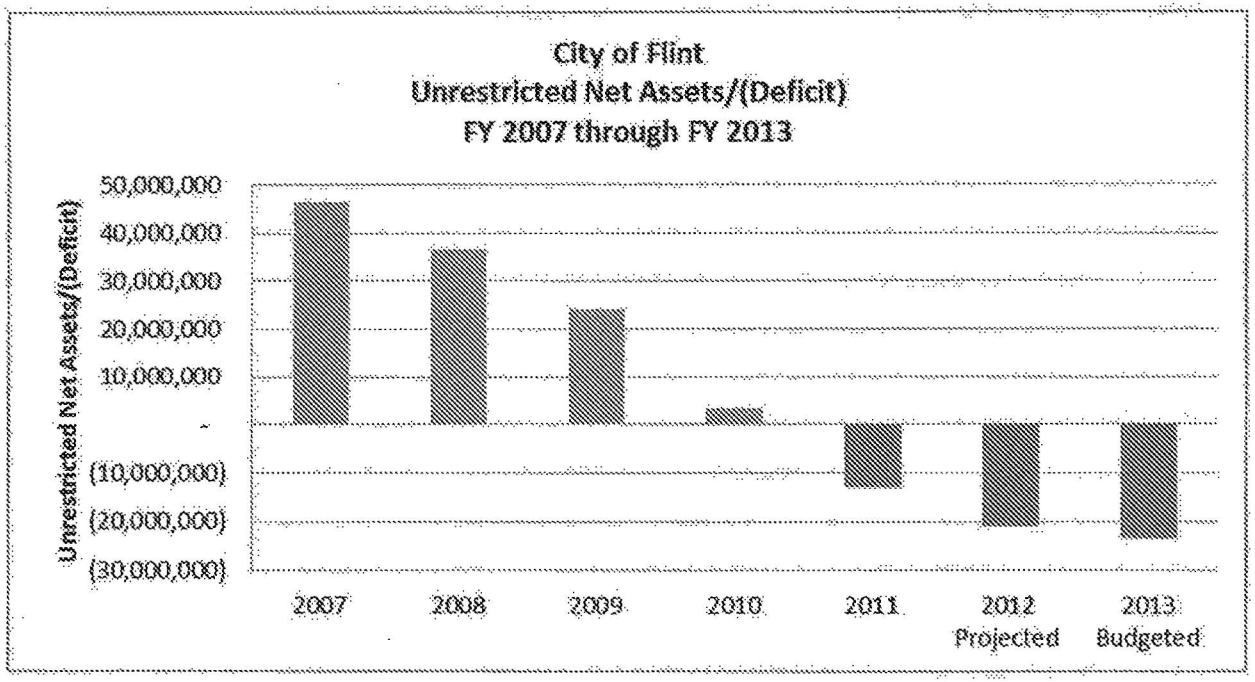
City of Flint

Budget Allocation and Fund Expenses

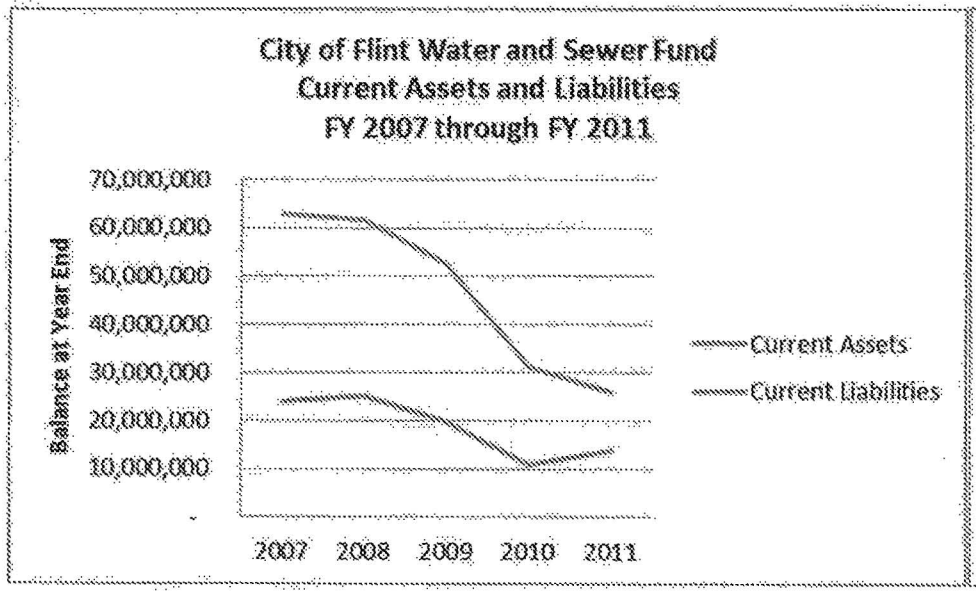


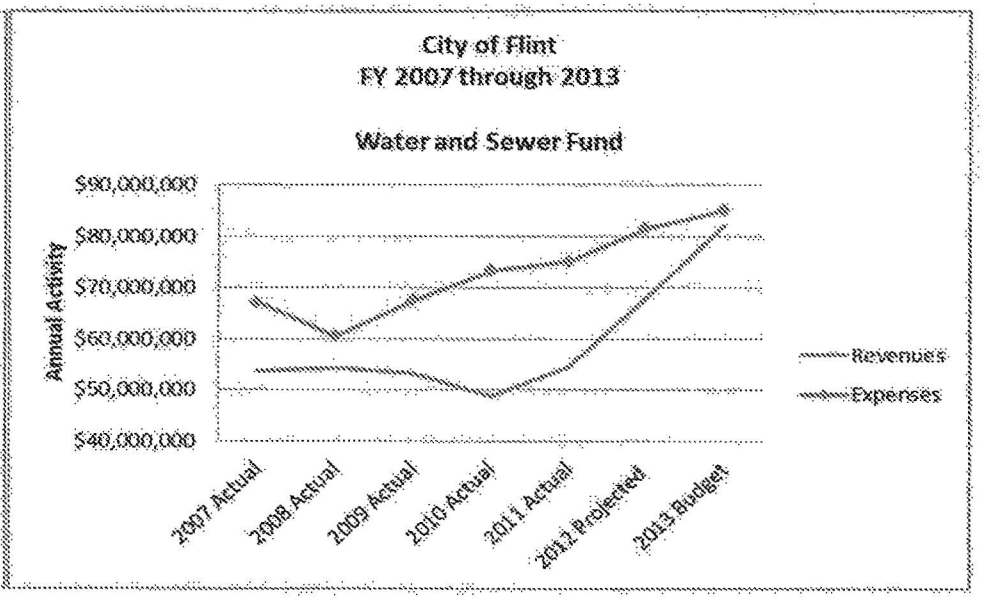


	Audited 2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Projected	2013 Budget
Operating Revenues	51,090,679	51,100,332	51,906,553	47,926,589	54,385,644	67,983,044	81,734,552
Other Revenues	2,627,939	3,274,450	1,442,383	764,886	68,645	126,670	455,867
Annual Revenues	53,718,618	54,374,782	53,348,936	48,691,475	54,454,289	68,109,714	82,190,419
Water Purchased	16,052,006	16,297,871	17,421,663	17,103,752	20,919,987	21,756,787	24,031,417
Personnel Costs	17,292,444	26,302,590	27,591,206	28,149,946	28,618,817	29,640,499	28,546,350
Operating Expenses	5,355,638	6,145,119	6,950,534	8,146,390	6,917,964	6,420,260	7,259,290
Administrative Expenses	21,300,900	4,229,382	3,403,231	7,327,630	6,221,627	11,465,462	14,140,047
Depreciation	7,217,142	7,132,870	8,364,022	8,854,889	8,689,809	8,615,000	7,500,000
Interest Expense	86,632	485,499	868,031	812,270	754,890	705,150	644,314
Transfers to Other Funds	-	-	2,990,000	2,990,000	2,990,000	2,990,000	2,990,000
Annual Expenses	67,304,762	60,593,331	67,588,687	73,384,877	75,113,094	81,593,158	85,111,418



	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Projected	2013 Budget
Revenues	53,718,618	54,374,782	53,348,936	48,691,475	54,454,289	68,109,714	82,190,419
Expenses	67,304,762	60,593,331	67,588,687	73,384,877	75,113,094	81,593,158	85,111,418

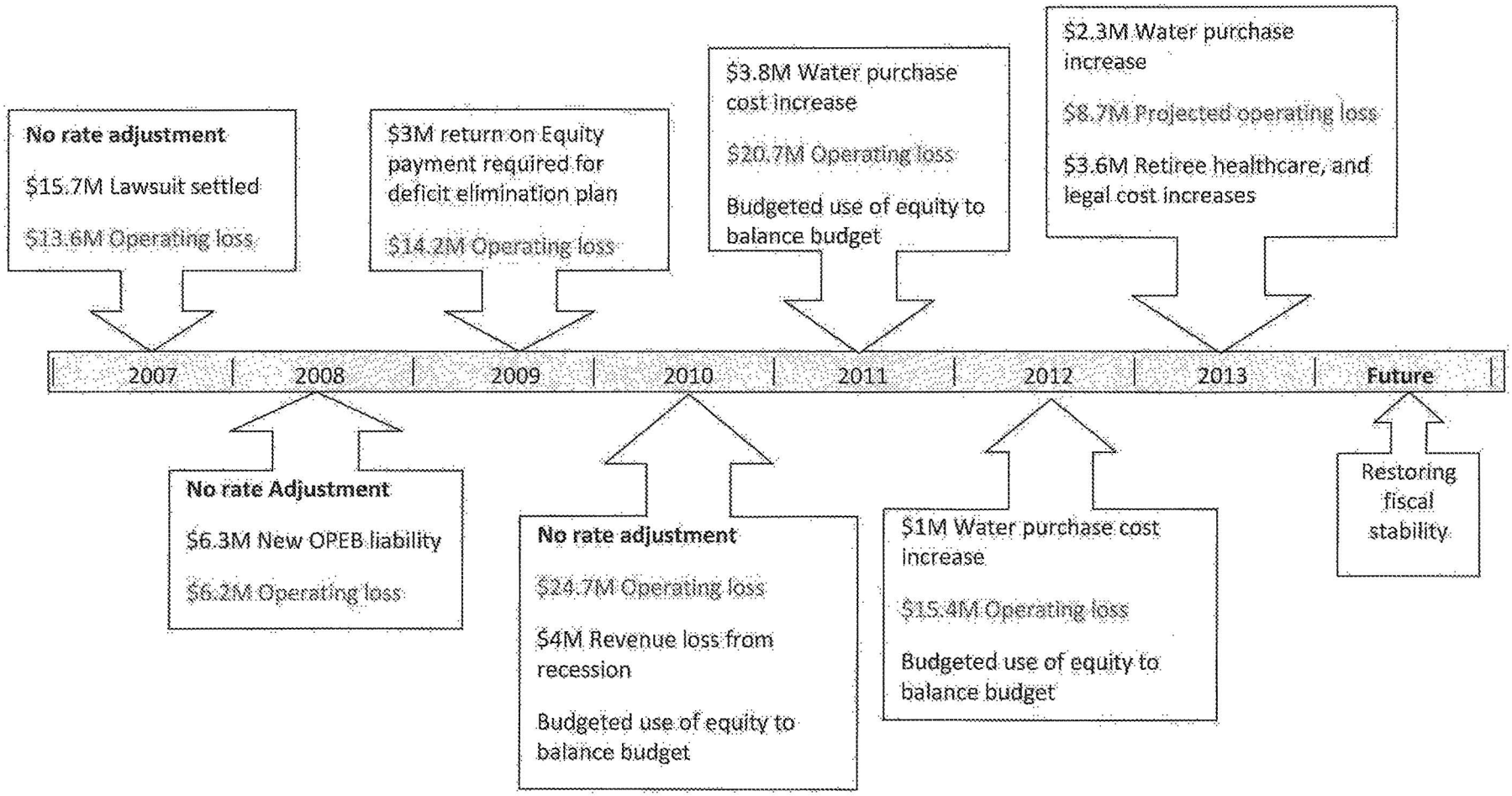




City of Flint

Recent Timeline of Water and Sewer Funds

FY 2007 through 2013



City of Flint- Water and Sewer System Additional Asset / Revenue Data

The average annual residential water sewer bill in FY2005 was less than $700 annually
The average annual residential water/ sewer bill in FY13 will be nearly $1,700

Expenses have exceeded revenues every year since 2006:

FISCAL YEAR	Rate Base	Revenues	Expenses	Revenues Minus Expenses	Unreserved System Equity	FACTORS IMPACTING SOLVENCY			COST IMPACT
2006	2005	$55,204,242	$50,933,792	**$4,270,450**	**$60,340,013**				
									(millions)
2007	2005	$53,856,857	$67,442,993	($13,586,136)	$46,399,452	No rate adjustment			??
						$15.7 million lawsuit settlement	15.7	0	$15.7
2008	2005	$54,374,781	$60,593,331	($6,218,550)	$36,482,488	No rate adjustment			??
						OPEB liabilities added	3.6	2.7	$6.3
2009	2009	$53,488,463	$67,728,218	($14,239,755)	$24,023,065	ROE payment added as part of City I	1.9	1.1	$3.0
2010	2009	$48,820,329	$73,513,725	($24,693,396)	$3,531,768	No rate adjustment			??
						Use of retained earnings budgeted	12.5	0.5	$13.0
						Revenue lost due to recession	2	2	$4.0
2011	2011	$54,527,079	$75,185,879	($20,658,800)	($12,868,907)	Use of retained earnings budgeted	7.1	3.5	$10.6
	2011					Water purchase cost increase	0	3.8	$3.8
2012		$68,279,187	$83,682,840	($15,403,653)	($20,694,122)	Use of retained earnings budgeted	5.1	0	$5.1
						Water purchase cost increase	0	0.8	$0.8
2013	2013	$82,220,420	$90,970,420	($8,750,000)	($23,379,690)	Water purchase cost increase	0	2.3	$2.3
						RHC/Legal/Admin Cost Allocation	2.1	1.5	$3.6
				($99,279,340)					$68.2

Calculation of Water and Sewer Rates for FY13 Budget

March, 2012:

	Expense Projection Based on FY12 Costs	Revenue Projection Based on FY12 Receipts	Difference Between Projected Revenues and Expenses	Rate Increase Necessary To Close Gap
Water	$49.9	$44.4	-$5.5	12.4%
Sewer	$31.0	$21.4	-$9.6	44.9%
TOTAL	$80.9	$65.8	-$15.1	22.9%

CITY of FLINT, MICHIGAN
WATER &/OR SEWER BILL

Service at: 5810 BALDWIN BLVD

TREASURER
CITY OF FLINT
P.O. BOX 1958
FLINT, MI 48501

PRESORTED
FIRST CLASS MAIL
US POSTAGE PAID
CITY OF FLINT

3419 Active

ACCOUNT NUMBER	DUE DATE
[redacted]	02/28/2012
	NET AMOUNT DUE
	147.85

Seq=3138

**AUTO [redacted]

RETURN THIS STUB WITH YOUR PAYMENT

00000376810000014785022820120000014913777O6

KEEP THIS PORTION FOR YOUR RECORDS

LAST READ/DATE/TYPE		NEW READ/DATE/TYPE		CONS	SERVICE	CHARGE
361	01/03/2012 A	363	02/02/2012 A	2	Sewer Non-metered	6.63
					Sewer Svc Chg	22.07
					Water	13.36
					Water Svc Chg	19.35

Prev. Balance	181.06
Payments	-75.00
Adjustments	0.00
Current Penalty	0.36
New Charges	61.41
Total Due	147.85
Due Date	02/28/2012

ACCOUNT: BALD-005810-0000-01 SERVICE AT [redacted]

PENALTY ASSESSED 30 DAYS AFTER DUE DATE

CITY OF FLINT
DEPARTMENT OF FINANCE

Customer Service Center

Dayne Walling
Mayor

Douglas Bingaman
Treasurer

CITY OF FLINT
WATER NON-PAYMENT TURN-OFF POLICY

1. Water services to any customer may be shut off if the account is not paid until after 30 days after the due date. (City ordinance 46-52 (h))

2. Non-payment turn-offs are done only Monday through Thursday. The Customer Service Center does not schedule non-payment turn-offs on Fridays, Saturdays, Sundays, or most recognized holidays.

3. Illegal usage, broken payment arrangements and NSF (non-sufficient funds) turn-offs are done at any time without additional notice.

4. Turn-off notices are mailed to delinquent customers fifteen (15) days before actual turn-off.

5. The water customer is responsible for maintenance of all plumbing in the premises including connection to City water mains or sewer lines.

6. If a customer disputes a water bill and is unable to resolve the issue with Customer Service personnel, the customer may request an administrative review. Further information on any water account may be obtained by calling (810) 766-7015 or visiting the Customer Service Center at 1st Floor, City Hall, 1101 S. Saginaw St.

Preliminary Options for Future City of Flint Water Sources

Consider a New Negotiated Contract with Detroit Water and Sewer Department

PRO'S	CON'S
No upfront capital costs	Lack of control over new / fixed changes
Possibility to negotiate a lower rate	Past practices
Ability to "Blend" water sources to further control costs	

Consider a Contract with the Karegnondi Water Authority

PRO'S	CON'S
Voting member of KWA board	Capital cost (debt service)
Ability to "Blend" water sources to further control costs	Uncertainty of final costs
Raw water is an asset for attracting new buisnesses	

Blended Use of the Flint River

PRO'S	CON'S
Helps control cost of water	

*** CURRENTLY NO DECISIONS HAVE BEEN MADE REGARDING THE FUTURE WATER SOURCE

Improvements for City of Flint Water System

Reduce Leakage

▪**Finalize a Preventative Maintenance Plan**
- ➢ (Planning started in January 2012, requires funding, … part of Operational Costs)
- ➢ Will help identify repair area's

▪**Reduce water theft**

▪**Replace water meters**
- ➢We currently have an eighteen month plan to replace all meters with more efficient "*Smart Meters*"

▪**Encourage routine household checks**
- ➢"Faulty" toilets are a significant reason for household water loss. and unexpected larger bills.

Other Leakage concerns

✓Transmission Loss

✓Fire Hydrants

✓Incorrect water bills

✓Non-Payment

CITY OF FLINT, MICHIGAN
Department of Finance

City Hall, Room #203
1101 South Saginaw Street
Flint, MI 48502
(810) 766-7268 / (810) 766-8675 (fax)

Dayne Walling
Mayor

Edward J. Kurtz
Emergency Financial Manager

Michael K. Brown
City Administrator

Gerald Ambrose
Finance Director

October 31, 2012

Edward J Kurtz
Emergency Financial Manager
City Of Flint Municipal Center
1101 S. Saginaw Street
Flint, MI 48502

RE: Cost Comparison, KWA v DWSD

Mr. Kurtz:

The City of Flint is considering whether joining the Karegnondi Water Authority (KWA) is a better alternative for the residents and businesses of Flint than continuing to purchase water from the Detroit Water and Sewer District (DWSD).

An important part of this consideration is the relative cost of the alternatives. We have compared the current projected costs of continuing to purchase water from DWSD to the projected costs of purchasing water from KWA.

The projected costs of purchasing water from DWSD come from our current and past experience, as well as statements from DWSD about their future costs. The costs of purchasing water from KWA are based on the KWA Lake Huron Water Supply Study, as updated by its October 2012 Preliminary Engineering Report Update, Appendix 20, dated October 4, 2012.

Based on the current contract with DWSD, the FY13 cost of purchasing water for the City of Flint only (excluding the sale of water to Genesee County) is budgeted at $14.4 million. Past experience indicates that it is reasonable to assume a 10% increase annually in the capacity charge from DWSD and a 5% increase in the commodity cost. It is also reasonable to assume a 5% increase in operational costs for the Flint Water Treatment Plant. Consequently, it appears that the costs for continuing to purchase water from DWSD will increase to $22.7 million by FY20.

Conversely, joining KWA and participating in the construction of infrastructure to receive water will require an up-front cost to the City of $2.3 million, to be paid over the first three years of joining. This would be paid by the City during the construction period while the City continues to purchase its water from DWSD. However, once the construction is complete and water delivery commences, the City's capacity charge will be fixed, based on the debt service necessary to finance construction. Operational costs for KWA water delivery and the Flint WTP are projected to increase by 5% annually.

Based on the assumptions in this comparison, the annual projected cost of purchasing water for the City of Flint is 15% or $2.6 million LESS using the KWA option in the first year of operation, increasing to 27% or $6.1 million LESS in the fifth year of operation. The only caveat is that in order to achieve this, the City will need to upfront KWA $3.25 million over 3 years prior to KWA beginning water delivery.

Concerns have been raised about the potential of cost overruns and delays in construction. These are reasonable concerns. An additional analysis, assuming a 15% cost overrun, and a one-year delay in construction, indicates that the gain to be achieved from participating in KWA is lessened (from $2.6 million in the first year to $2.3 million) and the City's upfront contribution is increased to $10.4 million if the City is required to make its first year's debt service payment before operations begin. The City's gain from participating in KWA is delayed, but once operations begin, the City's annual costs are less than continuing with DWSD, becoming net positive in FY20. However, given the City's precarious financial position, it is likely that the City would need to find some source of capital if such an up-front payment were necessary.

Finally, we have also analyzed what constraints DWSD would need to impose on its contract with the City of Flint in order to be a positive financial option. It would appear that if the capacity costs to Flint were to be fixed at the FY13 level and if annual operating cost increases were capped at 2.25%, then the cost to the City of Flint could be less than KWA.

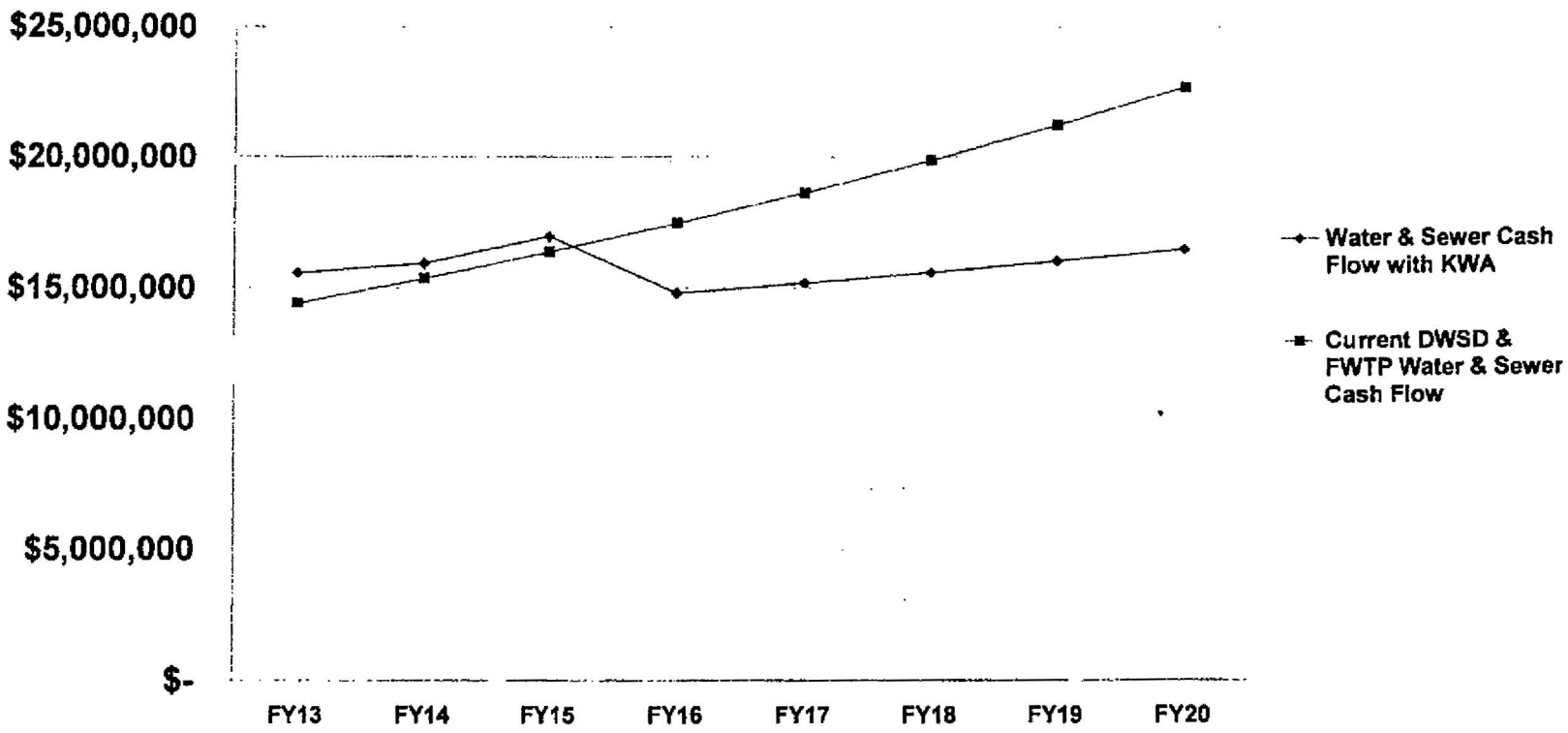
Attached are the three projections summarized above. First is the "Original Projection" utilizing the KWA Study. Second is the "Worse Case Projection" with cost increases and construction delays. Third is the reduced DWSD costs associated with fixed capacity costs and capped increases in operational costs.

Please contact me if you have any questions.

Gerald Ambrose
Director of Finance

GA:js
Attachments

Original Projection - Summary Comparison: KWA vs DWSD



FINAL 10/31/2012

ORIGINAL PROJECTION
SUMMARY COMPARISON: KWA V DWSD

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ -	$ -	$ -	$ -	$ -
KWA Entry Fee	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
KWA Debt Service	$ -	$ -	$ -	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
FWTP Debt Service	$ -	$ -	$ -	$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
KWA operations	$ -	$ -	$ -	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
FWTP operations w KWA	$ -	$ -	$ -	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Total Costs	$ 15,576,658	$ 15,936,535	$ 16,946,934	$ 14,888,149	$ 15,274,260	$ 15,679,676	$ 16,105,363	$ 16,552,334

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,851	$ 19,870,650	$ 21,219,435	$ 22,671,185

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual Cost: DWSD - KWA	$ (1,162,800)	$ (581,400)	$ (581,400)	$ 2,562,568	$ 3,342,591	$ 4,190,974	$ 5,114,072	$ 6,118,851
Cumulative Gain with KWA	$ (1,162,800)	$ (1,744,200)	$ (2,325,600)	$ 236,968	$ 3,579,559	$ 7,770,533	$ 12,884,605	$ 19,003,456

(1) This projection assumes that KWA begins delivery of water to Flint starting in July, 2016. Any interest on the bonds will be capitalized until that period. The City will be obligated to begin paying its $2,325,600 entry fee in FY13 - 2 payments of $581,400 in FY13, 1 payment in FY14 and 1 payment in FY15.

(2) The cost of the KWA option is projected to be $2,562,568 or 15% LESS than DWSD in the first year of operation (Year 4). This gain offsets the upfront costs of $2,325,600 by $236,968.

(3) The cost of the KWA option is projected to be $6.1 million or 27% LESS than DWSD in the 5th year of operation (Year 8)

(4) The cumulative savings by the 8th year from the beginning of the project are projected to be $19 million.

Detail of Original Cost Projections — FINAL — 10/31/2012

Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project

Cost of water to City of Flint (excluding Genesee) using continued service from DWSD

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	$ 4,411,660	$ 4,852,848	$ 5,338,133	$ 5,871,946	$ 6,459,141	$ 7,105,055	$ 7,815,560	$ 8,597,116
Escalator	1.10	1.10	1.10	1.10	1.10	1.10	1.10	
Commodity Cost (2)	$ 7,276,640	$ 7,640,472	$ 8,022,496	$ 8,423,620	$ 8,844,801	$ 9,287,041	$ 9,751,394	$ 10,238,963
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
Flint WTP Operating Cost (3)	$ 2,725,538	$ 2,861,815	$ 3,004,906	$ 3,155,151	$ 3,312,908	$ 3,478,554	$ 3,652,482	$ 3,835,106
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,851	$ 19,870,650	$ 21,219,435	$ 22,671,185

(1) Per FY13 Budget and DWSD Contract, fixed charge from DWSD for FY13 is $707,000 per month or $8.5 million total. Flint's cost is 52% or $4.4 million total.

(2) Per FY13 Budget and DWSD Contract, and based on 12 million gallons per day (mgd), cost is $7 3 million, based on $12.46/unit ($12.46x1600unitsx365).

(3) Per FY13 Budget, annual cost of WTP is $4.1 million. Genesee County pays $1,385,000 for emergency back up service.

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	$ 1,162,800	$ 581,400	$ 581,400		$ -	$ -	$ -	$ -
Fixed KWA Construction Cost (2)				$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
Escalator				1.00	1.00	1.00	1.00	
Fixed Flint WTP Construction Cost (3)				$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
Escalator				1.00	1.00	1.00	1.00	
Flint WTP Operating Cost (4)	$ 5,911,538	$ 6,207,115	$ 6,517,471	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
KWA Commodity Charge (5)	$ 759,200	$ 797,160	$ 837,018	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	KWA NOT AVAILABLE			$ 14,888,149	$ 15,274,260	$ 15,679,676	$ 16,105,363	$ 16,552,334

(1) The City will, upon joining, be required to pay an initial fee of $32,300 per MGD plus the same amount for each year until bonding for the project is obtained. At 18MGD, the City's cost is $581,400 annually. Since it is projected that fee will be assessed for 3 years, the City's upfront cost is projected at $2,325,600.

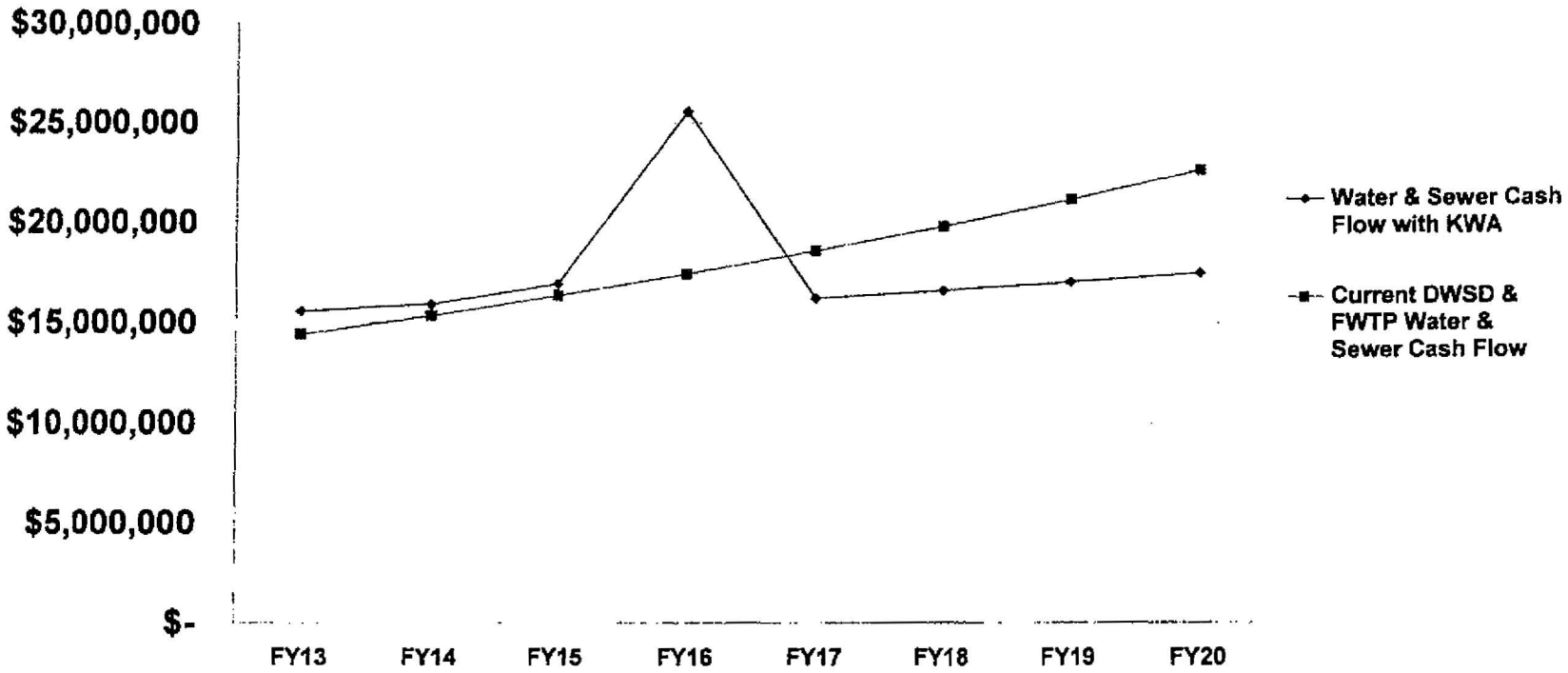
(2) Per KWA proposal, project cost is $272 million. City's fixed cost would be 30% of debt service, based on capacity design of 60mgd, of which 18MGD is for Flint. Debt service is based on 5% interest rate @ 25 years; 5% added to principal for capitalized interest for FY13, FY14, and FY15. ($272,421,588 plus $13,621,078 for 3 years = $313,284,792)

(3) Per KWA proposal, the cost of upgrading the Flint is $7.1 million. City's fixed cost would be100% of debt service based on 5% interest rate @ 25 years), with 5% added to cover capitalized interest for FY13, FY14, and FY15. (total principal = $8.165 million)

(4) Per FY13 Budget annual cost of WTP is $4,111,538. $1.6 million for electricity and chemicals & 2 FTE's are added. 100% City cost. 100%

(5) Per KWA proposal, initial commodity charge would be based on $1.30/unit or 7,500 gallons. Charge is based on 12MGD.

Worst Case Scenario - Summary Comparison KWA vs DWSD (15% Cost Overrun; One year delay in Water Supply delivery)



FINAL 10/31/2012

WORSE CASE PROJECTION
SUMMARY COMPARISON: KWA V DWSD
(15% Cost Overrun; One year delay in Water Supply delivery)

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ -	$ -	$ -	$ -
KWA Entry Fee	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
KWA Debt Service	$ -	$ -	$ -	$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128
FWTP Debt Service	$ -	$ -	$ -	$ 658,698	$ 658,698	$ 658,698	$ 658,698	$ 658,698
KWA operations	$ -	$ -	$ -	$ -	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
FWTP operations w KWA	$ -	$ -	$ -	$ -	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Total Costs	$ 15,576,658	$ 15,936,535	$ 16,946,934	$ 25,691,544	$ 16,349,150	$ 16,754,566	$ 17,180,253	$ 17,627,226

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,861	$ 19,870,860	$ 21,219,436	$ 22,671,185

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual KWA - DWSD	$ (1,162,800)	$ (581,400)	$ (581,400)	$ (8,240,826)	$ 2,267,700	$ 3,116,084	$ 4,039,182	$ 5,043,960
Cumulative	$ (1,162,800)	$ (1,744,200)	$ (2,325,600)	$ (10,566,426)	$ (8,298,726)	$ (5,182,642)	$ (1,143,460)	$ 3,900,500

"Worse Case" scenario differs from Original in these respects:

(1) Delivery of water to Flint from KWA is delayed by one year and construction costs are 15% above the original projection. Consequently, the City is required to begin paying for debt service one year before KWA begins delivery of water. This is in addition to its obligation to pay its initial entry fee of $581,400 plus $581,400 annually for the first 3 years.

(2) Once KWA begins delivering water in year 5, the annual operating costs are less than DWSD by 12%. Considering $10.6 million in upfront costs in the first 4 years prior to KWA operation, the cumulative cost of KWA exceeds the cost of DWSD until year 8.

(3) Cumulative savings by Year 8 are projected to be $3.9 million, compared to $19 million in the original projection.

Detail of Worse Case Cost Projections

FINAL 10/31/2012

Worse Case Scenerio

Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project

Cost of water to City of Flint (excluding Genesee) using continued service from DWSD

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	$ 4,411,680	$ 4,852,848	$ 5,338,133	$ 5,871,946	$ 6,459,141	$ 7,105,055	$ 7,815,560	$ 8,597,116
Escalator	1.10	1.10	1.10	1.10	1.10	1.10	1.10	
Commodity Cost (2)	$ 7,276,640	$ 7,640,472	$ 8,022,496	$ 8,423,620	$ 8,844,801	$ 9,287,041	$ 9,751,394	$ 10,238,963
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
Flint WTP Operating Cost (3)	$ 2,725,538	$ 2,861,815	$ 3,004,906	$ 3,155,151	$ 3,312,908	$ 3,478,554	$ 3,652,482	$ 3,835,106
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,851	$ 19,870,650	$ 21,219,436	$ 22,671,185

(1) Per FY13 Budget and DWSD Contract, fixed charge from DWSD for FY13 is $707,000 per month or $8.5 million total Flint's cost is 52% or $4.4 million total.

(2) Per FY13 Budget and DWSD Contract, and based on 12 million gallons per day (mgd), cost is $7.3 million, based on $12.46/unit ($12.46x1600unitsx365)

(3) Per FY13 Budget, annual cost of WTP is $4.1 million. Genesee County pays $1,386,000 for emergency back up service

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
Fixed KWA Construction Cost (2)				$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128
Escalator						1.00	1.00	
Fixed Flint WTP Construction Cost (3)				$ 658,698	$ 658,698	$ 658,698	$ 658,698	$ 658,698
Escalator								
Flint WTP Operating Cost (4)	$ 5,911,538	$ 6,207,115	$ 6,517,471	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
KWA Commodity Charge (5)	$ 759,200	$ 797,160	$ 837,018	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	KWA NOT AVAILABLE				$ 16,349,150	$ 16,754,566	$ 17,180,253	$ 17,627,225

(1) The City will, upon joining, be required to pay a, initial fee of $32,300 per MGD plus the same amount for each year until bonding for the project is obtained. At 18MGD, the City's cost is $581,000, for a total of $2,325,600..

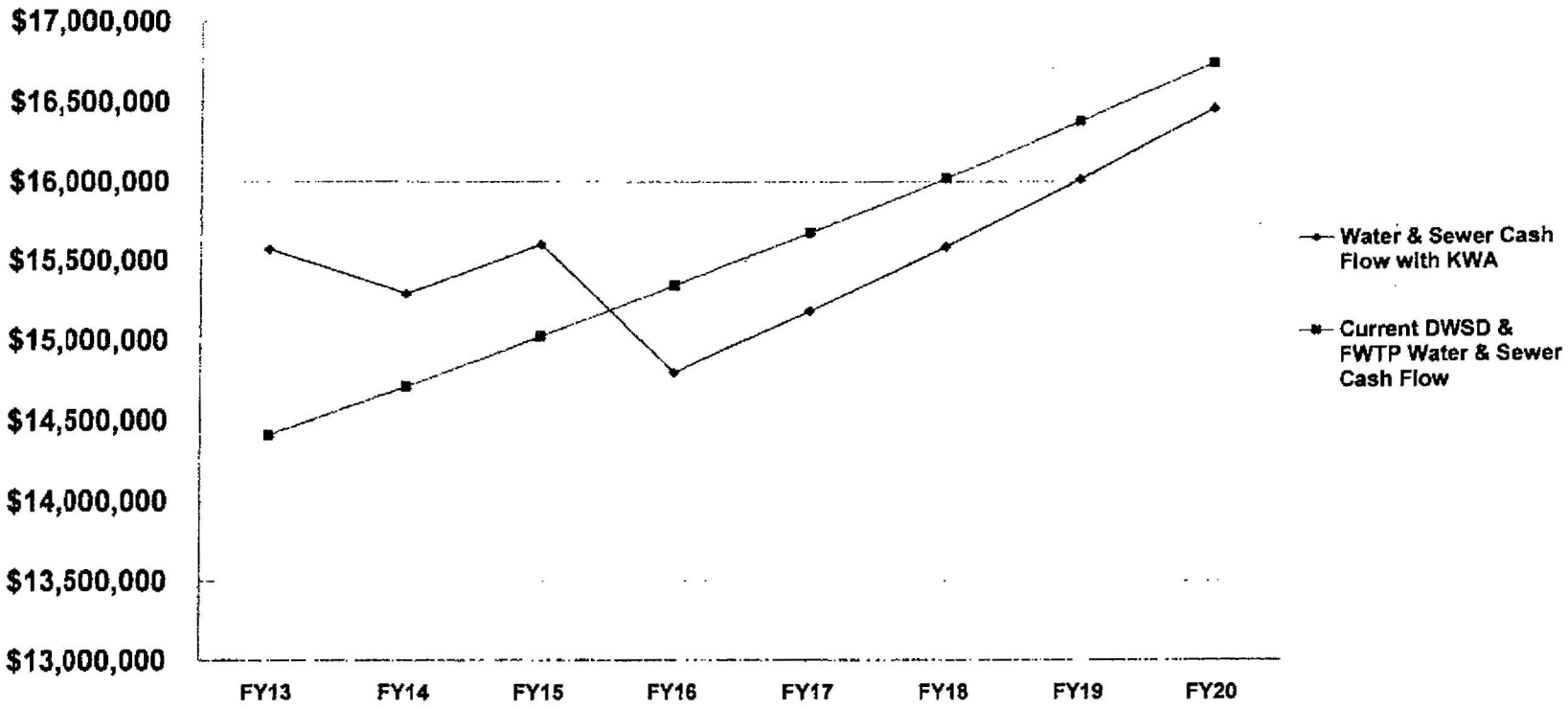
(2) Per KWA proposal, original project cost is $272 million. City's fixed cost would be 30% of debt service, based on capacity design of 50mgd, of which 18MGD is for Flint. Debt service is based on 5% interest rate @ 25 years; 5% added to principal for capitalized interest for FY13, FY14, and FY15. ($272,421,588 plus $13,621,078 for 3 years = $313,284,792). **The costs here are increased by 15%; debt service starts in FY16 but water is not available until FY17.**

(3) Per KWA proposal, the cost of upgrading the Flint is $7.1 million. City's fixed cost would be100% of debt service based on 5% interest rate @ 25 years), with 5% added to cover capitalized interest for FY13, FY14, and FY15. (total principal = $8.165 million). **Again, costs here are increased by 15%; debt service starts in FY16 but water is not available until FY17. Debt service is now on $9.4 million.**

(4) Per FY13 Budget annual cost of WTP is $4.111,538. $1.6 million for electricity and chemicals & 2 FTE's are added. 100% City cost.

(5) Per KWA proposal, initial commodity charge would be based on $1.30/unit or 7,500 gallons. Charge is based on 12MGD.

ALTERNATE PROJECTION - SUMMARY COMPARISON: KWA V DWSD WITH DWSD COSTS REDUCED (Fixed Costs held constant; Commodity Costs Increased by 2.25% Annually)



FINAL 10/31/2012

ALTERNATE PROJECTION
SUMMARY COMPARISON: KWA V DWSD WITH DWSD COSTS REDUCED
(FIXED COSTS HELD CONSTANT; COMMODITY COSTS INCREASED BY 2.25% ANNUALLY)

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 14,713,859	$ 15,024,358	$ -	$ -	$ -	$ -	$ -
KWA Entry Fee	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
KWA Debt	$ -	$ -	$ -	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
FWTP Debt	$ -	$ -	$ -	$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
KWA operations	$ -	$ -	$ -	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
FWTP operations w KWA	$ -	$ -	$ -	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Total Costs	$ 15,576,658	$ 15,295,259	$ 15,605,758	$ 14,888,149	$ 15,274,260	$ 15,679,676	$16,105,363	$ 16,552,334

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 14,713,859	$ 15,024,358	$ 15,345,778	$ 15,678,562	$ 16,023,172	$16,380,091	$ 16,749,823

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual Cost: DWSD - KWA	$ (1,162,800)	$ (581,400)	$ (581,400)	$ 457,629	$ 404,302	$ 343,496	$ 274,728	$ 197,489
Cumulative Gain with KWA	$ (1,162,800)	$ (1,744,200)	$ (2,325,600)	$ (1,867,971)	$ (1,463,669)	$ (1,120,173)	$ (845,445)	$ (647,956)

(1) This projection assumes that DWSD fixed costs remain at 2013 levels and that operating costs increase by 2.25% annually

(2) KWA costs are as in the Original Projection.

(3) In this comparison, KWA costs are still less once operations begin (by 2.9%), and cumulative gain does not occur until after year 8. Over time, DWDS costs could be less with these limitations on cost increases.

Detail of Cost Projections

FINAL 10/31/2012

Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project
(FIXED COSTS HELD CONSTANT; COMMODITY COSTS INCREASED BY 2.25% ANNUALLY)

Cost of water to City (excluding Genesee) using continued service from DWSD with modified escalator

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680
Escalator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Commodity Cost (2)	$ 7,276,640	$ 7,440,364	$ 7,607,773	$ 7,778,947	$ 7,953,974	$ 8,132,938	$ 8,315,929	$ 8,503,038
Escalator	1.0225	1.0225	1.0225	1.0225	1.0225	1.0225	1.0225	
Flint WTP Operating Cost (3)	$ 2,725,538	$ 2,861,815	$ 3,004,906	$ 3,155,151	$ 3,312,908	$ 3,478,554	$ 3,652,482	$ 3,835,106
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	$ 14,413,858	$ 14,713,859	$ 15,024,358	$ 15,345,778	$ 15,678,562	$ 16,023,172	$16,380,091	$ 16,749,823

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	$ 1,162,800	$ 581,400	$ 581,400		$ -	$ -	$ -	$ -
Fixed KWA Construction Cost (2)				$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
Escalator				1.00	1.00	1.00	1.00	
Fixed Flint WTP Construction Cost (3)				$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
Escalator				1.00	1.00	1.00	1.00	
Flint WTP Operating Cost (4)	$ 5,911,538	$ 6,207,115	$ 6,517,471	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
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KWA Commodity Charge (5)	$ 759,200	$ 797,160	$ 837,018	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	KWA NOT AVAILABLE			$ 14,888,149	$ 15,274,260	$ 15,679,676	$16,105,363	$ 16,552,334

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 30, 2014 3:25 PM
To: Silfven, Ken (GOV); Wurfel, Sara (GOV)
Subject: FW: Draft Governors Briefing - Flint Water
Attachments: Governor Briefing - Flint-Draft.docx; Flint Monthly Pumpage Comparison.pdf; ODWMA-399-022.pdf

Heads up, staff prepared a briefing for the governor at his request regarding the water situation in Flint. This is a draft of that. Just got it myself.
b

From: Busch, Stephen (DEQ)
Sent: Tuesday, September 30, 2014 12:37 PM
To: Thelen, Mary Beth (DEQ); Wyant, Dan (DEQ)
Cc: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Wurfel, Brad (DEQ); Howes, Sarah (DEQ); Shekter Smith, Liane (DEQ)
Subject: Draft Governors Briefing - Flint Water

Director Wyant,

Attached is our draft of a briefing for the Governor's Office regarding City of Flint water system boil water advisories. This is per your request following our meeting last Thursday 9/25.

I have also attached a copy of the policy ODWMA-399-022 which specifically provides guidance regarding boil water advisory situations, and a chart showing the significant increase in the City of Flint's water demands following the extreme conditions experienced this past winter.

If you have any questions or need any additional information, I will be in Lansing this week on Thursday afternoon and Friday morning, and as always you can reach me on my cell phone as listed below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

MDEQ - Governor's Office Briefing - City of Flint Drinking Water (Draft)

What contributed to the Boil Water Advisories in the City of Flint?

A number of factors, not one specific cause, likely contributed to the Boil Water Advisories (BWA's) in the City of Flint during August and September 2014. While use of the Flint River has increased the amount of natural organic matter in the City's water, the City's water treatment plant (WTP) has performed well above treatment requirements for organic carbon removal. In addition, less than 20% of the water system was included in the advisory area. If treatment had been compromised, detections would have been widespread throughout the City, rather than in such a localized area.

The City's water distribution system has suffered from a lack of infrastructure investment and asset management. Most of the City's over 550 miles of water mains are now over 75 years old, and constructed of cast iron piping. Cast iron pipe is subject to internal corrosion, called tuberculation, which causes buildup on the pipe interior leading to water quality issues, reduced flow and pressures, and leakage. Tuberculation also encourages the development of biofilms, layers of bacteria that attach to the interior pipe wall. Biofilm growth is common in areas of piping with little or no disinfectant residual, and together with tuberculation can clog water lines to the point of insufficient water pressure.

The City has also experienced decades of a declining user base and water use associated with vacant homes, commercial businesses and industrial property. Declining water use leads to excess residence time within the City's distribution pipes and water storage facilities, accelerating tuberculation, biofilm growth, and disinfectant residual degradation. While the City has recently seen an infusion of funding for blight removal, contractors completing this work have been improperly using fire hydrants, causing hydraulic disturbances that dislodged and suspended settled debris, which may have contributed to the bacterial contamination.

The winter of 2014 was also one of the coldest experienced by the water system. The City, which historically has unaccounted water losses of over 30%, has seen even greater losses since February due to an increase in cold weather related water main breaks and leaks. The City lacks a formal maintenance program for its over 7,250 valves, which would normally be used to limit impacts during break repairs. Two valves on the transmission line used to supply the area of the BWA were found to be closed during the City's investigation, causing longer residence time, reduced disinfectant residual, reduced flow, and reduced pressure. One of these valves has remained broken.

The BWA's also occurred during the warmest and for 2014 relatively wet periods of August and September. Warm weather conditions are not only more conducive to bacterial growth but also degrade the water's disinfectant residual carried out from the WTP more quickly. Longer residence times, biofilms, and tuberculation also contribute to disinfectant residual degradation. Warm wet weather conditions also allow water contaminated with bacteria to pool around piping with leaks and breaks.

Process for Issuance and Cancelation of a Boil Water Advisory

There are a number of conditions that can trigger boil water advisories. This includes the following:

- Bacteria Monitoring Detections
- Bacteria Standards Violations
- Treatment System Failures
- Waterborne Disease Outbreaks
- Loss of System Pressure
- Water Main Breaks
- Other Interruptions in Service

The DEQ has developed policy regarding BWAs to help guide staff, provide consistency, and maintain public health. A copy of DEQ policy ODWMA-399-022 is attached.

BWA's may be self-initiated by the water system, issued collaboratively in consultation with the DEQ, or when necessary mandated by the DEQ. Requesting customers to boil the water when bacterial contamination has occurred provides an added barrier of public health protection.

The BWA's which recently occurred in the City of Flint were associated with bacteria monitoring detections and violations of bacteria standards. These advisories were issued by the City of Flint collaboratively in consultation with the DEQ.

Current regulations regarding monitoring and standards for bacteria in water distribution systems were developed by the EPA, have been in effect since 1990, and incorporated into the Michigan Safe Drinking Water Act. There are a variety of bacteria, parasites, and viruses which can potentially cause health problems if humans ingest them in drinking water. Testing water for each of these potential pathogens would be difficult and expensive. Instead, water systems test for Total coliform and E.coli. Total coliform bacteria react to water treatment in a manner similar to many pathogens. Therefore, the presence of total coliform in drinking water indicates there may be a pathway for pathogens or other contaminants to enter the system. The absence of total coliforms in the distribution system minimizes the likelihood that pathogens are present. E.Coli is itself a pathogen, and its detection would be direct evidence of a health risk.

Once a BWA has been issued, time is needed to investigate potential causes and implement corrective measures. The larger the water system, the more time this may take. Once corrective measures have been taken, samples must be collected and analyzed to confirm that bacteria are no longer present. Using the most common analytical method, samples must be incubated for a period of 24 hours before results can be obtained. In situations where the bacterial contamination has been confirmed, two consecutive rounds of safe samples collected at least 24 hours apart are normally obtained before canceling a BWA. Adding each of these steps together, a normal response period to cancel a BWA under these circumstances would be expected to take at least 3 to 4 days.

Recent History of City of Flint Water System

Historically the City of Flint had been a customer of the Detroit Water and Sewerage Department (DWSD) while simultaneously maintaining the City of Flint WTP to provide emergency backup service using the Flint River. The WTP performed quarterly test operations to maintain readiness and was utilized twice in 2009, supplying water once for 2 days and the other for 3 days.

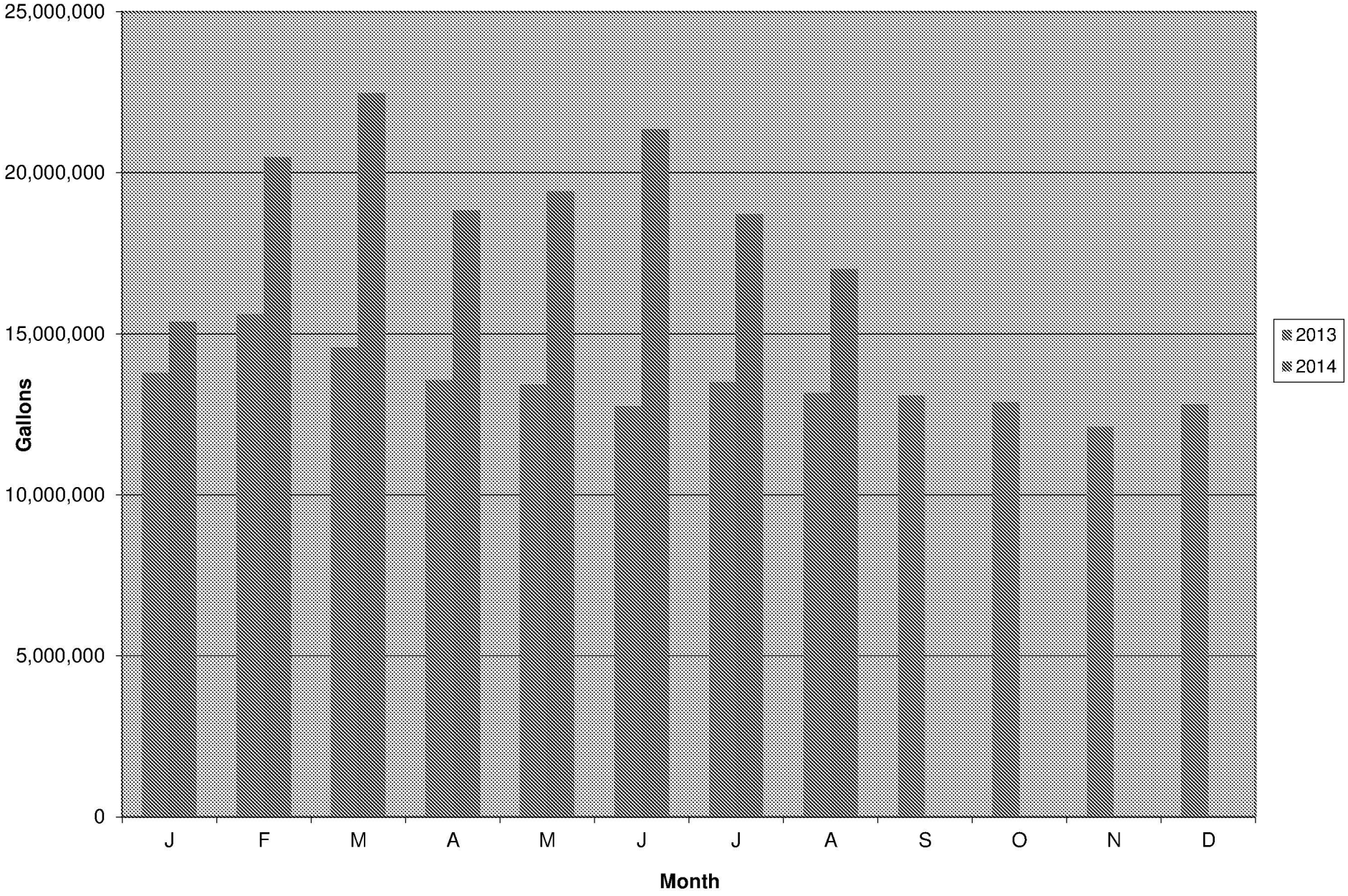
In April 2013, the City of Flint notified DWSD that it would be terminating service in the future and contracting for raw water service from the Karegnondi Water Authority (KWA). Work on the KWA pipeline from Lake Huron broke ground in June 2013 and is expected to be completed with connection in late 2016.

In August 2013, Rowe Professional Services Company completed an engineering proposal for improvements to the City of Flint WTP that would allow continuous operation of the WTP utilizing the Flint River in lieu of continuing service from DWSD until completion of the KWA pipeline. In March 2014, the City of Flint entered into a Consent Agreement with the DEQ regarding the Flint WTP lime sludge facility. In April 2014, the DEQ issued a construction permit for improvements to the Flint WTP. On April 25, 2014 the City of Flint began continuous operation of the WTP, using water from the Flint River and discontinued the purchase of water from DWSD.

A BWA was issued from August 15–20, 2014, for a portion of the City of Flint due to localized detections of Total Coliform and E.Coli bacteria. Another BWA was issued from September 5-9, 2014, due to localized detections of Total coliform bacteria in the same and adjacent portions of the City of Flint. The advisory covered an area approximately 6 square miles. The City of Flint has a total land area just over 34 square miles.

While many of the BWA contributing factors listed above require long term solutions, the City has taken operational steps to limit the potential for a BWA to reoccur. The City has increased flushing of water mains to limit residence time, maintain disinfectant residual, and help remove buildup and deposits within the piping. The City is boosting chlorine disinfectant residual at locations in the distribution system as needed. The City continues to investigate water leaks, water main breaks, and the status and condition of system valves.

City of Flint Monthly Averages



DEQ	OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: October 12, 2007 **Revised Date:** **Reformatted Date:** January 24, 2013	**Subject:** Guidelines for Issuing Boil Water Advisories to Address Potential Microbial Contamination of Community Water Supplies **Division/Office and Program Names:** ODWMA-Public Water System Supervision Program	**Number:** ODWMA-399-022 Page: 1 of 10	**Category:** ☐ Internal/Administrative ☐ External/Noninterpretive ☒ External/Interpretive

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

INTRODUCTION, PURPOSE, OR ISSUE:

Community water systems are expected to provide customers with a continuous supply of water that meets both federal and state drinking water standards. However, there may be circumstances when the public must be notified that the water may not be safe. In these circumstances, a boil water advisory may be issued to prevent illness from known or suspected microbiological contamination. This policy is to provide guidance to Office of Drinking Water and Municipal Assistance (ODWMA) drinking water program staff on advising community water system personnel when to issue and rescind a boil water advisory, the appropriate content, and the manner and method of delivery.

AUTHORITY:

Administrative rule R 325.10401a promulgated under the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), being Michigan Compiled Law 325.1001 *et seq.*, requires public notification for violations of maximum contaminant levels and treatment techniques plus other situations as determined by the DEQ. Each public notice is required to state what actions consumers should take during a violation, which may include a statement recommending water customers boil all water used for consumption until further notice.

In addition, R 325.11207 allows the DEQ to require the supplier of water to provide notice to customers or users that include any precautionary measures deemed necessary when an interruption in water service occurs, which could include low, zero, or negative pressure events.

Furthermore, R 325.12303 requires a supplier of water to include in their contingency planning a description of precautions or measures to be taken to protect the health of those customers or users that may be affected by an emergency. R 325.12304 also requires a supplier of water to notify the DEQ when an emergency is discovered and how the supply will notify its customers or users. While the content of this notification to customers or users may vary depending upon individual circumstances, each notification to customers or users must state what actions or precautions they should take, which may include a statement to boil all water used for consumption until further notice.

STAKEHOLDER INVOLVEMENT:

DEQ staff met with Municipal Utilities Directors to seek input on issues that were subsequently addressed in this policy and procedure.

DEFINITIONS:

"Boil Water Advisory (BWA)" – A written or verbal advisory issued by the community water system or DEQ notifying the users of the water system that the water is or may be contaminated and advising them to boil the water prior to using it for drinking or cooking.

"Community Water Supply (CWS)" – A public water supply (PWS) that provides year-round service to not fewer than 15 living units, or that regularly provides year-round service to not fewer than 25 residents. Examples include municipalities, such as cities, villages, and townships; apartment complexes; manufactured housing communities; condominiums; and nursing homes.

"Complete Loss of Pressure" – Sustained negative pressures or pressure below five psi in any portion of a distribution system. It does not include instantaneous low or negative pressure occurring from pressure surges caused by pump cycling, valve operation, or other water hammer events.

"Maximum Contaminant Level (MCL)" – The maximum permissible level of a contaminant in water that is delivered to any user of a PWS.

"Repeat Sample" – A sample that is collected and analyzed in response to a previous coliform-positive sample.

"Routine Sample" – A water sample that is collected and analyzed to meet the monitoring requirements for total coliform, as outlined in the written sampling plan.

"Tier 1 Public Notice" – A public notice required to be provided as soon as practical but not later than 24 hours after the supplier learns of a violation or situation that has significant potential to have serious adverse effects on human health as a result of short-term exposure. A Tier 1 Public Notice also requires the supplier to initiate consultation with the DEQ as soon as practical but not later than 24 hours after the supplier learns of the violation or situation. Examples of these violations or situations include:

1. A violation of the Total Coliform MCL when fecal or *E.coli* are present in the distribution system;
2. A violation of the treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit;
3. An occurrence of a waterborne disease outbreak;
4. A failure or significant interruption in key water treatment processes;
5. A disruption of the water supply or distribution system; and

6. Other violations or situations as determined by the DEQ on a case-by-case basis. A violation or situation that requires a Tier 1 Public Notice also requires the supplier to consult with the DEQ to determine additional public notice requirements, including the timing, form, manner, frequency and content of the notice designed to reach all persons served, and any repeat notices or directions. At a minimum, one or more of the following forms of delivery must be used:
   a. Appropriate broadcast media:
   b. Posting of the notice in conspicuous locations throughout the area served by the system;
   c. Hand delivery of the notice to persons served by the system; or
   d. Another delivery method approved by the DEQ.

Within 10 days of completing the Tier 1 Public Notice, the supplier shall submit to the DEQ a certification that it fully complied with the public notification requirements, including a representative copy of the type of notice distributed to persons served by the system and to the media.

"Tier 2 Public Notice" – A public notice required to be provided as soon as practical but not later than 30 days after the supplier learns of a violation or situation that has the potential to have serious adverse effects on human health. Examples of these violations or situations include:
1. All violations of MCL, maximum residual disinfectant level, and treatment technique requirements except where the DEQ determines a Tier 1 notice is required.
2. Violations of monitoring and testing procedure requirements, taking into account potential health impacts and persistence of the violation; and
3. Failure to comply with a variance or exemption.

For a Tier 2 Public Notice, the DEQ may, on a case-by-case basis, grant extensions in writing for up to three months from the date the supplier learns of the violation or situation, for reasons such as coordinating with billing cycles or if the violation or situation was quickly resolved and no longer poses any risk to the persons served. A Tier 2 Public Notice shall be repeated every three months as long as the violation or situation exists. A Tier 2 Public Notice and any repeat notices shall be in a form and issued in a manner that is reasonably calculated to reach persons served in the required time period. At a minimum, the notice shall be provided:
1. By mail or direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the supplier, and
2. By other methods reasonably calculated to reach other persons not receiving a bill, such as apartment dwellers, university students, nursing home patients and prison inmates. Other methods may include:
   a. Publication in a local newspaper
   b. Delivery of multiple copies to apartment complexes and manufactured housing communities
   c. Posting in public places or on the Internet
   d. Delivery to community organizations

"Treatment Technique (TT)" – Minimum treatment requirement or a necessary methodology or technology that is employed by a supplier of water for the control of the chemical, physical, biological, or radiological characteristics of a PWS.

POLICY:

A BWA may be issued for a variety of reasons when microbial contamination is known or suspected. Total Coliform Rule (TCR) MCL violations, surface water TT violations, low or loss of pressure events, and waterborne disease outbreaks are circumstances when a BWA may be issued. Each of these situations is discussed in detail below. However, these situations are not the only times a BWA can or should be issued. Each incident must be handled on a case-by-case basis, using professional judgment to evaluate the circumstances in each situation.

Finally, there may be situations when water systems experience contamination that is not microbial, but chemical due to a chemical spill or backflow due to a cross connection. In these cases, a notice to customers could include "Do Not Use" language since boiling the water may not remove the contamination.

Types of Incidents:

1. Violation of a Drinking Water Standard

    a. TCR MCL Violations

    An acute TCR MCL violation occurs when monitoring indicates the presence of coliform organisms in both a routine and a follow-up repeat sample in the same monitoring period, and either analysis (routine or repeat) is also positive for fecal or *E.coli.* Because this MCL violation confirms the presence of a more direct connection to contamination, these violations warrant issuance of a BWA, unless there are unique circumstances.

    A non-acute TCR MCL violation occurs when monitoring indicates the presence of coliform bacteria in 2 or more samples in the same monitoring period for a supplier collecting less than 40 samples per month, or in more than 5 percent of the samples for a supplier collecting 40 or more samples per month, and the criteria for an acute violation did not occur, i.e., fecal coliform or *E.coli* were NOT detected present in either a routine or repeat sample. For example, a system that collects 5 samples per week for a total of 20 per month may have 1 sample report positive for total coliform or fecal/*E.coli* during the first week, but all repeat samples report negative for coliform. If another sample in a subsequent week also reports total or fecal/E.coli positive, but again, all repeat samples are coliform-negative, then a non-acute TCR MCL violation has occurred because 2 or more samples reported positive for coliform, but no fecal coliform or *E.coli* were detected in both a routine and a repeat sample.

When a non-acute violation occurs, staff should evaluate possible sources of contamination. If a source is identified that is considered likely to contribute disease causing organisms or result in water of questionable quality still being distributed, a BWA should be instituted. Examples of contaminant sources that would elevate the public health risk include, but are not limited to:

- flooding of the wells
- failure of the treatment system
- recent construction activity in the distribution system
- vermin (birds, rodents, etc.) activity in storage tanks
- system-wide or extensive pressure loss in the distribution system

Even if the source of contamination is not easily identified, a BWA may be appropriate for a non-acute TCR violation if the violation is widespread or ongoing. A BWA shall be instituted if monitoring indicates *E. coli* or fecal coliform contamination unless unusual circumstances warrant consideration, such as the absence of any coliform in repeat samples, or when staff are assured that the contamination has been eliminated before confirmation results are available.

However, not every TCR MCL violation must result in a BWA. There may be a few exceptions when there is a TCR MCL violation but a BWA is not needed. For example, a violation may be declared in situations where samples collected on different days from widely dispersed locations report coliform present even though repeat samples do not show positive results. In this case, the sampling results may constitute a MCL violation, but a BWA may not be necessary.

If a BWA is deemed necessary by the ODWMA, it should be issued as soon as possible but no later than 24 hours after the system learns of the violation. Because violation of an MCL results in required public notification (PN) per the PN Rule, the water supply may issue the PN and BWA simultaneously in one document (highly recommended) and must meet all the requirements of a Tier 1 PN and include BWA language.

After measures have been taken to eliminate the source(s) of contamination, such as initiating or increasing chlorine feed rates and system flushing, additional sampling must be conducted. Raw water bacteriological sampling is also encouraged to eliminate the raw water as the possible source of contamination. For MCL violations, the BWA can be rescinded after the analyses of two sets of samples collected 24 hours apart report the absence of coliform bacteria. The number of samples in each set should be a minimum of five samples, but can be decreased or increased based on system size or the extent of the affected area. Systems are encouraged to use routine sample sites if available and to use extra care if routine sites are not available.

b. Surface Water Treatment Rule (SWTR) TT Violations

SWTR TT violations include:

- exceedance of turbidity standards at filter confluence point
- failure to meet disinfection contact time requirements (C*T)
- failure to meet disinfection residual standards

Upon determination of an SWTR TT violation, ODWMA staff must determine if the violation poses a threat to public health. For example, if the turbidity levels at the filter confluence point were found to have exceeded 0.3 nephlometric turbidity units (NTUs) in 95 percent of the samples in a two-month period, an SWTR TT violation has occurred. Based upon a review of plant performance and consultation with program managers, staff may determine that no significant health risk was posed and no BWA is necessary. However, the water supply must still issue a Tier 2 PN within 30 days of the violation. On the other hand, a BWA is likely to be necessary for a treatment plant that gets overwhelmed by excessive runoff and reports a turbidity level in excess of 1.0 NTU at the filter confluence point for a four-hour period.

If the TT violation is ongoing or prolonged, or the ODWMA determines a significant public health risk is posed, ODWMA staff may elevate the PN to Tier 1 status, which must be issued within 24 hours and include BWA language. After appropriate measures have been taken to reduce or eliminate any health risk, additional monitoring must be conducted. Appropriate measures may include increasing coagulant dose, increasing chlorine residuals through the treatment plant, backwashing filters more often and flushing key system components. In this case, a BWA can be rescinded after analyses of two sets of samples collected 24 hours apart report the absence of coliform bacteria. The number of samples in each set should be a minimum of five samples, but can be decreased or increased based on type and severity of the TT violation.

Surface water plants utilizing conventional or direct filtration must add a primary coagulant under R 325.11008. Failure to add a primary coagulant is a violation of Act 399, and may also contribute to a TT violation under R 325.10611 (Filtration and Disinfection) which requires 3-log inactivation of giardia and 4-log inactivation of viruses. In these cases, ODWMA staff will have to determine if the violation poses a threat to public health and whether other actions are necessary, such as requiring a BWA. Factors to consider if a BWA is necessary would include chlorine residual concentrations throughout the treatment plant, raw water quality, C*T compliance, plus individual filter effluent and combined filter effluent turbidity levels.

2. Waterborne Disease Outbreaks

Waterborne disease outbreaks can be declared by the Centers for Disease Control and Prevention, the Department of Community Health, a local health department, or other public

health institutions. If an outbreak is declared, the ODWMA will work with the declaring agency to ensure affected community public water supplies take appropriate measures to mitigate public exposure. These measures will include appropriate public notification, including instructions to boil water if appropriate. The ODWMA will allow the water supply to rescind the notification when the agency declaring the outbreak indicates it is safe to do so as the result of additional monitoring.

3. Interruptions in Service

   a. Negative or Complete Loss of Pressure

      A complete loss of pressure or negative pressure in the distribution system must result in a BWA being issued to all water customers in the impacted area. After pressure is restored and the system recovers (tanks are filling and enough sources are operating to ensure pressures do not drop again), the affected area should be thoroughly flushed and coliform samples must be taken throughout the area to determine if the distribution system remains free of coliform contamination. The number of samples will vary depending on the size of the system and the extent of the area impacted. For very small systems that experience a power failure that results in a complete loss of pressure throughout the distribution system, a minimum of three samples should be collected. If applicable, chlorine residual measurements should be taken to ensure that an adequate disinfectant residual is present. If possible, chlorine dosages and residuals should be increased by 1 to 2 parts per million during this period as a corrective and preventive measure. If the first round of sampling does not detect coliform bacteria, the advisory may be rescinded. However, if the first round of sampling detects coliform bacteria, additional flushing should be conducted in the area where the positive coliform samples were collected and a second round of coliform samples collected from the area. The BWA should remain in effect until safe coliform sample results are obtained.

   b. Low Pressure Events

      Low pressure events might not result in a BWA. Low pressure is considered a drop in pressure below 20 psi but greater than 5 psi. A drop in water pressure in a distribution system could allow contamination to enter the water system through backflow by backpressure or backsiphonage. The decision to issue a BWA should be made on a case-by-case basis and be based upon professional judgment of all available data that may indicate the extent of the problem, such as:

      - Geographical extent of the pressure loss
      - Nature of the service area (residential vs. commercial/industrial)
      - Duration of the low pressure condition
      - Disinfection practices of the water system
      - Relative elevation differences in the service area
      - Status of the local cross connection control program

- Age and condition of the underground piping
- Amount of underground piping located in areas of a high groundwater table
- Ability and willingness of the operators to rapidly apply chlorine to the system or distribute an increased chlorine residual throughout the affected area

After normal pressure is restored, the impacted area should be thoroughly flushed and coliform samples taken throughout the area to determine if the distribution system is free of any bacteriological contamination. The collection of coliform samples after low pressure events is not absolutely required, but may be recommended based on the factors above.

c. Water Main Breaks or Repairs

A BWA may be issued during water main breaks and after the break has been repaired. Whether or not to issue a BWA will depend on the location and severity of the break and, more importantly, a decision based on sound engineering judgment that the integrity of the water system has been maintained. If at all possible, repairs should be performed under reduced or low pressure by closing the closest valves on each side of the break just enough to reduce the flow so the repairs can be made under pressure while the water flowing from the break is diverted away from the excavation to maintain clean sanitary conditions. If the water main can be repaired under pressure, and no nonpotable water, soil, or other potential contaminants entered the main during the break and repair process, then a BWA is not necessary. If the water main that was removed from service is flushed, disinfected, and sampled in accordance with AWWA Standard C651 before being placed back into service, a BWA does not need to be issued.

If a water main break results in a complete loss of pressure before, during, or after the repair is made, a BWA must be issued to all customers in the affected area. The BWA should remain in effect until the area is flushed, chlorine residuals are reestablished (if applicable), and sample results do not detect coliform bacteria.

Content and Delivery of a BWA

If the ODWMA determines a BWA is necessary, the water supply must issue the advisory as soon as practical, but not later than 24 hours after being advised to do so. The supply must make a good faith attempt to notify all customers in the affected area. Appropriate methods of distribution are situation specific, but may include radio or television broadcasts, hand delivery, and/or posting in conspicuous locations throughout the area. Delivery requirements as detailed in the PN Rule should be used to determine appropriate delivery methods.

Although there are content requirements for public notification under the PN Rule, there are no requirements specific to boil water language. To ensure all appropriate information is transmitted to the customers, a BWA should include the same content elements as required for

public notification under the PN Rule. If a BWA is issued as the result of an MCL violation and the water supply issues the BWA in conjunction with the required PN (highly recommended), the content MUST meet all PN Rule content, delivery, and reporting requirements.

The ODWMA boil water language is consistent with the U.S. Environmental Protection Agency policy that requires water be brought to a boil and allowed to boil for one minute before use. The language also suggests the use of bottled water as an alternative to boiling and describes the circumstances under which boiled or bottled water should be used.

Staff should notify the appropriate local health department and the Department of Agriculture and Rural Development, Food and Dairy Division, whenever a BWA is issued or rescinded. These agencies may receive calls from concerned customers or be involved in oversight of facilities impacted by the boil advisory and, therefore, need to be aware of the situation.

Several BWA templates have been created and are available to ODWMA staff on the DEQ Intranet. To ensure consistency and inclusion of all necessary content, these templates should be used as the basis for PNs and/or a BWA. Available templates include, but are not limited to:

- Advisory for a TCR MCL.
- Advisory for a low/no pressure event.
- Notification for cancellation of a BWA.

PROCEDURES:

WHO	DOES WHAT
Public Water Supply	Notify DEQ of results in a timely manner as required by law and follow through with appropriate actions.
District Staff	Respond to all TCR and TT violations plus complete loss of pressure events in a timely manner and determine whether a BWA needs to be issued. • If needed, assist supply in drafting BWA and determining most appropriate method of delivery with approval from the District Supervisor. • If needed, assist the supply in determining actions to remove the possible contamination including steps needed to rescind the BWA.
District Staff	Provide on-site technical assistance for acute TCR MCL violations and other boil water situations as appropriate.
District Supervisors	Assist District Staff in the all matters pertaining to issuing a BWA.

REFERENCES:

Safe Drinking Water Act, 1976 PA 399, as amended, being Michigan Compiled Law 325.1001 *et seq.*, and the administrative rules promulgated thereunder, being R 325.10101 *et seq.* of the Michigan Administrative Code.

OFFICE CHIEF APPROVAL:

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance

1/18/2013
Date

DEPUTY DIRECTOR APPROVAL:

Jim Sygo, Deputy Director

1/24/2013
Date

From: Jason Lorenz [jlorenz@cityofflint.com]
Sent: Thursday, October 16, 2014 2:14 PM
Subject: PRESS RELEASE: Statement on GM Water Agreement
Attachments: GM.Water.Agreement.Statement.pdf

For Immediate Release

Water Issues for General Motors are Not Issues for Residents

Flint, Michigan – October 16, 2014 – The City of Flint is committed to ensuring that all Flint residents have safe quality drinking water. That is why we recently reached an agreement with General Motors to allow the company to temporarily use Flint Township as a water source for their manufacturing needs.

The City of Flint uses chloride as an important component in making water safe for drinking, but that can cause problems for GM's machining work. The agreement comes after GM raised concerns about chloride levels in Flint's treated water.

This temporary switch is needed to allow GM to use water that does not have the same level of treatment provided for high quality drinking water. This ensures that Flint residents will continue to have safe quality drinking water but minimizes the impact on GM's machining work. City officials continuously test drinking water to ensure quality.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039
jlorenz@cityofflint.com

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY
ICMA-CM, MPA

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

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This temporary switch is needed to allow GM to use water that does not have the same level of treatment provided for high quality drinking water. This ensures that Flint residents will continue to have safe quality drinking water but minimizes the impact on GM's machining work. City officials continuously test drinking water to ensure quality.

–END–

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 5:33 PM
To: Wurfel, Sara (GOV)
Subject: FW: Flint Head Start told to not use city of Flint water?

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 2:40 PM
To: Minicuci, Angela (DCH); Murray, David (GOV)
Cc: Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

Hi Dave,

I attached the Bureau of Children and Adult Licensing (BCAL) GovDelivery email in my earlier email, but I've cut and pasted below for easier access. As you'll see, the article is making subscribers (primarily people who have licensed day cares and other facilities) aware of the city of Flint warning residents of potential dangers in the drinking water. BCAL is not ordering anyone to do anything. I apologize for not notifying the Governor's Office. I didn't see this until after it went out, and it didn't occur to me that the governor's office would need to be aware of it. In retrospect I should have let you know.

Please let me know if you need any additional assistance.

Thanks,

Bob

Having trouble viewing this email? View it as a Web page.

City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water

The city says there's been too much disinfection byproduct in Flint's water system recently, something that -- over many years could cause liver, kidney or central nervous system problems and an increased risk of cancer.

The notice from the city says Flint water is safe to drink but warns that those with a severely compromised immune system, who have an infant or who are elderly may be at increased risk and should seek advice about drinking water from their health care provider.

For others, there is no need to boil water or take other actions, the notice says.

It is recommended that licensed child care providers and licensed adult foster care and homes for the aged providers seek medical advice or use bottle water when serving

individuals at increased risk as outlined above.

For more information, go to to the city's website at http://cityofflint.com.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 2:16 PM
To: Murray, David (GOV); Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

I agree about the concern with this notice going out. Bob and I spoke about this. Bob, I know you may not be involved when every messages like this go out, but I think a conversation should be had with local DHS offices who use GovDelivery about what is appropriate to send and what is not.

Angela

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 2:02 PM
To: Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Re: Flint Head Start told to not use city of Flint water?

Bob, if that went out on Jn. 29, that's what he's referring to. Do you have a response if I refer him to you?

Also, can you send me a copy of that, because I'm certain we'll get questions today.

It's a bit concerning that such a notice went out and we didn't get a heads-up.

Dave

Sent from my iPad

On Feb 3, 2015, at 12:07 PM, Wheaton, Bob (DHS) <WheatonB@michigan.gov> wrote:

> Everyone,
>
> Attached is a DHS Bureau of Children and Adult Licensing GovDelivery email that went out to subscribers of the BCAL newsletter. It doesn't prohibit child care centers from using Flint water, but suggests that they seek medical advice or use bottled water. So maybe that's what the intermediate school district is talking about regarding the Head Start program.
>
> It's possible MDE could have issued something as well, so I'll check with them.
>
> Bob
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Tuesday, February 03, 2015 11:22 AM
> **To:** Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?

I asked Ron to go back to the GISD for some specific information about the recommendation, asking for specific department names and people.

We'll get to the bottom of this.

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:19 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Not on our end, I think we covered it last week! I was just curious so I could be ready for calls.

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:15 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Our event is 3 p.m. today. Is there anything that might be important for us to know in advance?

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:10 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Hi Dave – is there an event still planned for this week?

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:08 AM
To: Minicuci, Angela (DCH); Wheaton, Bob (DHS); Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

This is news to me. Let me check with Ron for some details.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

Hi Jen, Angela,

Ron Fonger from The Flint Journal left me a message stating that DHS told the Genesee Area Intermediate School District told the Head Start program not to use city of Flint water.

Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is [redacted]

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
[redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Murray, David (GOV)
Sent: Friday, February 06, 2015 3:26 PM
To: Agen, Jarrod (GOV); Wurfel, Sara (GOV)
Subject: FW: Flint Water

I have concerns about this.

http://www.veolianorthamerica.com/en

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Dave & Harvey: We are working with Veolia North America, the water consulting team Flint has hired to "assess the situation." We're planning to hold a media roundtable with city officials on Tuesday to introduce the Veolia team to local reporters. Gerry Ambrose suggested we invite some of the folks you invited to attend the newser earlier this week. Is that a list you can share with me or would it be better for the invite to come from you or the EM directly? I don't have a specific time yet but can provide that information for you when it is available. What do you think?

Kelly

PS I forgot to say thanks!!!!

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503
[redacted]
Office: (517) 487-6320
Fax: (517) 487-5080

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 10:53 AM
To: Silfven, Ken (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Flint Mayor request to Governor regarding Flint Water
Attachments: Flint Mayor Letter to Governor.pdf

Our chief put it very well below in terms of DEQ's message. Here's the play:

Flint did a lousy job communicating this to the public at the outset via the media.
The public is unsettled about the situation.
Flint announced a public meeting to talk about the situation.
On the day of the meeting, Flint Mayor sends a letter to you guys, essentially saying that because the of EM, this is your problem.
Fill in the blank for what the city tells the public at the meeting this evening.

Send calls here as you see fit, we'll handle it. As for the letter, here it is.

b

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, January 21, 2015 10:26 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Wurfel, Brad (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

In light of the Mayor's letter, this could be quite uncomfortable for us tonight.

Our position has always been that we do not dictate which acceptable option(s) a water supply may choose. Our responsibility is to see that operations are managed properly, regulations are met, and safe water is delivered. For example, when Flint decided to leave Detroit and operate using the River, our role wasn't to tell them our opinion; only what steps would be necessary to make the switch.

Now that there is a violation of a drinking water standard, we have been treating Flint as we would any other supply. It is up to them to propose a solution/corrective action. Our role is to determine the reasonableness of that proposal. One option available to them is to continue to use the river until the KWA source is available as long as they implement operational changes to mitigate the formation of DBPs. Another acceptable option is to return to Detroit (GLWA) until the KWA source is available. And third option could certainly be returning to GLWA permanently.

The Mayor is saying that since there is an EM, the state (Governor) has responsibility for decisions being made (not our position). It will be very important for DEQ staff to limit our discussion to our role under the Safe Drinking Water Act. Hopefully, the EM will be prepared to respond if and when the conversation veers off into this other arena.

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance

Michigan Department of Environmental Quality
517-284-6543

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 8:41 AM
To: Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ)
Subject: Flint Mayor request to Governor regarding Flint Water

FYI. Please see the link below. The mayor of Flint has requested the state provide assistance through a number of specific initiatives.

http://www.mlive.com/news/flint/index.ssf/2015/01/flint_mayor_asks_governor_for.html

As we are scheduled to participate in the meeting in Flint this evening please let me know if we need to further discuss these requests.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

CITY OF FLINT

Dayne Walling
Mayor

January 18, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing to convey serious concerns about water quality and to request your support for my proposed Flint Water Improvement Plan. Access to safe and clean water is a basic human right, and, therefore, policy and budget decisions need to ensure that water is affordable and secure for everyone in Flint and all across Michigan It is essential there is City, State and Federal cooperation to address the challenges here and to meet the needs of vulnerable populations.

The Flint Water Improvement Plan is focused in five areas: safety, quality, access, investment and education. The plan puts safety and quality first because this is fundamental. It is designed to be a sustainable solution for the City of Flint and the community as we move towards a new permanent water supply from Lake Huron through the Karegnondi Water Authority. My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the State and Federal levels.

Safety & Quality

- 100% Safety is the standard
- City of Flint reports testing data to the public to assure safety and expands testing sites and frequency
- Bring on experienced river water treatment operational management in the City of Flint

Access

- Announce an amnesty program for Flint water service turn-ons and reduce the turn-on fee
- Develop a revised affordable payment plan policy to encourage customers to return
- Design Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for the elderly and vulnerable families

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State investments
    - State approves City of Flint's Distressed Cities Fund applications

- Federal and State support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community
- Federal and State grants for infrastructure improvements in alignment with the Flint Master Plan

* City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

* Develop a community partnership with universities to provide household and business customers with information on testing and conservation
* Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information and water assistance with the Keep the Water Flowing Fund and support services
* Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

It is also critical to restore the public confidence in Flint Water. The implementation of this plan must be accompanied by extensive community engagement including local elected officials. My objective is to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and government personnel.

It is imperative that we communicate better and provide residents more information. I understand representatives from the Michigan Department of Environmental Quality will be joining a public forum this week at City Hall. This engagement going forward is vital so thank you for supporting their efforts. I think this issue of transparency is important for communities all across the State. I recommend a review of the applicable laws and policies and, at a minimum, a new requirement that water testing data be reported publicly no less than quarterly by law in all Michigan communities in Flint's population category.

Thank you for the consideration Governor. There is nothing more important in Flint right now than fixing the water problems. We must work together to identify funds to repair and update the water treatment facilities and city-wide infrastructure and to help those persons without access to clean water so that the entire Flint community has sustainable, safe, secure and affordable water now and into the future. This is an important issue for the state of our State of Michigan and I urge you to work with us to implement solutions.

Sincerely,

Dayne Walling, Mayor
City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; Flint Emergency Manager Jerry Ambrose

From: Wurfel, Brad (DEQ)
Sent: Thursday, March 28, 2013 4:32 PM
To: Stanton, Terry A. (Treasury)
Cc: Silfven, Ken (GOV); Wurfel, Sara (GOV)
Subject: Re: Flint water proposal

Genesee county is moving forward with this project to run a pipe to Lake Huron. DEQ already has permitted them. Flint has an EM or they would already have committed. They're in here making a very strong case right now.

Dillon is joined by phone. So everyone is clear, DEQ staff support and Wyant is likely to recommend supporting flint joining the county at the conclusion of this dialogue.

Just want to make sure we all are together on this. Looks like something substantial is about to happen. This will be news in Flint and in Detroit, either way.

Sent from my iPhone

On Mar 28, 2013, at 4:14 PM, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov> wrote:

> Yes. Brom Stibitz is repping Treasury and keeping me updated.
>
> -----Original Message-----
> From: Wurfel, Brad (DEQ)
> Sent: Thursday, March 28, 2013 4:11 PM
> To: Stanton, Terry A. (Treasury); Silfven, Ken (GOV); Wurfel, Sara (GOV)
> Subject: Flint water proposal
>
> Terry, are you looped into the conversation happening in con hall right now with city of flint's request to move off detroit's water?
>
> Sent from my iPhone

From: Silfven, Ken (GOV)
Sent: Wednesday, January 21, 2015 10:42 AM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: RE: Flint Public Meeting Carpool

Thanks B.
Sara/Dave – please note reference to city's letter to gov as well tonight's meeting, in case the MLive folks, etc. come your way.
Ken

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 10:19 AM
To: Silfven, Ken (GOV)
Subject: FW: Flint Public Meeting Carpool
Importance: High

See below. There's a public meeting in the city of Flint tonight regarding the ongoing challenges with their drinking water system. The public has concerns – some the result of the city's poor communication efforts, some (I suspect) the result of folks who stir the public fear pot for political leverage. But the City apparently sent a letter to the Governor today. I have not seen it, but wanted to put a flare in the air. See below.
b

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 9:48 AM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ)
Subject: RE: Flint Public Meeting Carpool

Brad,

Mike and I are available most of the day. I have a conference call 11-12 and an offsite meeting 2:30-4:30. Just come down to the first floor whenever you have time.

The issue has further escalated this morning with a letter from the Flint Mayor to the Governor requesting additional assistance.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 9:45 AM
To: Busch, Stephen (DEQ)
Subject: RE: Flint Public Meeting Carpool

Steve, thanks and my apologies for missing our confab yesterday afternoon. SOS stuff made for a crazy day.
Not sure I'm going to make it to Flint tonight, but wanted to spend a few minutes today if you've got time.
Bluntly, I have tremendous confidence in you and Mike to handle yourselves admirably with the public and press.

My only concern is that the City has communicated so poorly that we could end up in position to serve as their defacto spokespeople.
Let me know if you've got a few today.
b

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 20, 2015 3:45 PM
To: Wurfel, Brad (DEQ)
Subject: Flint Public Meeting Carpool

Brad,

Mike and I were planning to carpool up to Flint tomorrow night. Did you want to carpool as well? Just let us know. Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 2:02 PM
To: Wheaton, Bob (DHS)
Cc: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Re: Flint Head Start told to not use city of Flint water?

Bob, if that went out on Jn. 29, that's what he's referring to. Do you have a response if I refer him to you?

Also, can you send me a copy of that, because I'm certain we'll get questions today.

It's a bit concerning that such a notice went out and we didn't get a heads-up.

Dave

Sent from my iPad

On Feb 3, 2015, at 12:07 PM, Wheaton, Bob (DHS) <WheatonB@michigan.gov> wrote:

> Everyone,
>
> Attached is a DHS Bureau of Children and Adult Licensing GovDelivery email that went out to subscribers of the BCAL newsletter. It doesn't prohibit child care centers from using Flint water, but suggests that they seek medical advice or use bottled water. So maybe that's what the intermediate school district is talking about regarding the Head Start program.
>
> It's possible MDE could have issued something as well, so I'll check with them.
>
> Bob
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Tuesday, February 03, 2015 11:22 AM
> **To:** Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?
>
> I asked Ron to go back to the GISD for some specific information about the recommendation, asking for specific department names and people.
>
> We'll get to the bottom of this.
>
> ---
>
> **From:** Smith, Jennifer (DCH)
> **Sent:** Tuesday, February 03, 2015 11:19 AM
> **To:** Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
> **Subject:** RE: Flint Head Start told to not use city of Flint water?
>
> Not on our end, I think we covered it last week! I was just curious so I could be ready for calls.
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Tuesday, February 03, 2015 11:15 AM

To: Smith, Jennifer (DCH); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Our event is 3 p.m. today. Is there anything that might be important for us to know in advance?

From: Smith, Jennifer (DCH)
Sent: Tuesday, February 03, 2015 11:10 AM
To: Murray, David (GOV); Minicuci, Angela (DCH); Wheaton, Bob (DHS)
Subject: RE: Flint Head Start told to not use city of Flint water?

Hi Dave – is there an event still planned for this week?

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 11:08 AM
To: Minicuci, Angela (DCH); Wheaton, Bob (DHS); Smith, Jennifer (DCH)
Subject: RE: Flint Head Start told to not use city of Flint water?

This is news to me. Let me check with Ron for some details.

From: Minicuci, Angela (DCH)
Sent: Tuesday, February 03, 2015 10:48 AM
To: Wheaton, Bob (DHS); Smith, Jennifer (DCH); Murray, David (GOV)
Subject: RE: Flint Head Start told to not use city of Flint water?
Importance: High

Hi Bob,

No, we did not do this. I'm looping in Dave Murray. Dave, any insight?

Angela

From: Wheaton, Bob (DHS)
Sent: Tuesday, February 03, 2015 10:28 AM
To: Smith, Jennifer (DCH); Minicuci, Angela (DCH)
Subject: Flint Head Start told to not use city of Flint water?

Hi Jen, Angela,

Ron Fonger from The Flint Journal left me a message stating that DHS told the Genesee Area Intermediate School District told the Head Start program not to use city of Flint water.

Is that something MDCH did? I'm pretty sure it's not something we'd be doing, but I'm checking with our child care licensing folks to make sure. If this is an MDCH matter, Ron's number is 810-347-9963.

Thanks,

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037

Lansing, MI 48909
Phone: 517-373-4287
[redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

<mime-attachment>

From: Murray, David (GOV)
Sent: Monday, February 09, 2015 12:51 PM
To: Wurfel, Sara (GOV)
Cc: Wurfel, Brad (DEQ)
Subject: Re: Flint Water Update

It seems as if a crisis was created to provide work for a consultant client.

Sent from my iPhone

On Feb 9, 2015, at 12:33 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Not really – still wondering if TR is working with/through the Emergency Manager OR mayor, or both?
>
> Regardless, is a bit fishy.
>
> ---
>
> **From:** Wurfel, Brad (DEQ)
> **Sent:** Monday, February 09, 2015 12:17 PM
> **To:** Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Murray, David (GOV)
> **Subject:** FW: Flint Water Update
>
> Answers the question about whether the Mayor is getting counsel from TR …
> b
>
> ---
>
> **From:** Kelly Rossman-McKinney [redacted]
> **Sent:** Monday, February 09, 2015 12:01 PM
> **To:** Wurfel, Brad (DEQ)
> **Subject:** Flint Water Update
>
> Hi, Brad – Wanted to let you know that Flint will be announcing its water consultant tomorrow at a 2 PM media roundtable. Holler if you have questions or need info. Thanks!
>
> Kelly

<image001.gif>

Kelly Rossman-McKinney, APR
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Suite 3160 • Detroit, MI 48243
125 Ottawa Ave NW, Suite 235 Grand Rapids, MI 49503
Office: 517-487-9320
Fax: 517-487-5080
[redacted]

Subject: FW: Conf Call re Flint Water
Location: [redacted]

Start: Thu 9/24/2015 2:30 PM
End: Thu 9/24/2015 3:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Muchmore, Dennis (GOV)

-----Original Appointment-----
From: Muchmore, Dennis (GOV)
Sent: Thursday, September 24, 2015 1:41 PM
To: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Clement, Elizabeth (GOV); Clayton, Stacie (GOV); Baird, Richard (GOV); VanSickle, Michele (GOV); Murray, David (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Lasher, Geralyn (DCH); Grijalva, Nancy (DCH); Saxton, Thomas (Treasury); Pleyte, Beth (Treasury); Walsh, John (GOV); Hall, Jean (GOV); Mcbride, Bill (GOV)
Subject: Conf Call re Flint Water
When: Thursday, September 24, 2015 3:30 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 8[redacted]

[redacted]
[redacted]- Harvey to host

Subject:	RDS/DM/BM/NL/DW/Maggie Pallone/Karen Tommasulo/Col. Etue & Lt. Col. Sands/HH/DMurray/TSaxton - Meeting Re: Flint Water
Location:	Governor's Conference Room, Romney
Start:	Tue 9/29/2015 12:00 PM
End:	Tue 9/29/2015 12:30 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	GovCalendar
Required Attendees:	Mcbride, Bill (GOV); Wisniewski, Wendy (GOV); Muchmore, Dennis (GOV); Lyon, Nick (DCH); Grijalva, Nancy (DCH); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Etue, Kriste (MSP); Klotz, Josephine (MSP); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Hansen, Rachel (GOV); Murray, David (GOV); Adamczyk, Lynne (GOV); Sands, Thomas (MSP)
Optional Attendees:	Clement, Elizabeth (GOV); Agen, Jarrod (GOV)

[redacted]#

HH by Phone

[redacted]

Host: [redacted]– RH to dial in as host

From: Murray, David (GOV)
Sent: Wednesday, March 04, 2015 6:15 AM
To: Wurfel, Sara (GOV)
Subject: Flint water response points
Attachments: Flint water response points.docx

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@michigandmurray

Flint water briefing and talking points

Communications: Dave Murray, murrayd1@michigan.gov, 517-449-8343

The problem

- Community activists are continuing to raise public concerns about the quality of Flint water, and the talk has grown uglier.
    - Longtime activist A.C. Dumas is raising the issue of an "environmental racism" lawsuit.
    - The president of the Michigan chapter of Al Sharpton's National Action Network told the media on Tuesday that Flint water is "almost as bad as gas chambers for Jews."

High-level points

- Flint residents need and deserve clean, safe water.

- There is potentially some short-term assistance the state and other groups can provide, but Flint needs significant upgrades to its water infrastructure to replace an aging system that has long been neglected.

- The state recently awarded the city $2 million in grants to help with some of the issues, including a plan to locate the areas where pipes are most in need of repair to allow the city to prioritize its replacement projects.

- The Department of Environmental Quality continues to work with the city to monitor water quality.

- **Only if asked:**
    - If asked about the accusations of racism, we should push back hard.
        - These are water infrastructure problems that have been growing in Flint for decades.
        - The change from Detroit water to water from Lake Huron via a new pipeline was a plan created by and supported by the Flint City Council and the mayor. The emergency manager at the time signed off on the plan at the urging of the council and mayor.
        - State leaders have worked with the city to help through its financial struggles to improve public safety, services and the overall quality of life.

Background

- The administration is looking into a variety of options that could improve the color and smell of the water while continuing to explain that the water is safe, and that Flint's water infrastructure needs significant upgrades for a long-term solution.
    - Options include working with area foundations and businesses to purchase filters to be attached to kitchen sinks that would improve water color and smell.
    - Another option would be to make bottled water available to affected residents.

- Flint's water issues are an infrastructure issue.
    - The system is 80 years old, and has not been adequately maintained for about 40 years.
    - The temporary water source – the Flint River – has harder water than the previous source, which was the Detroit Water and Sewer District.
        - The harder water exacerbates the problems in the aging water pipes, and residents have reported an increase in problems since the April switch from Detroit water to Flint River water.
    - The city is in the process of building a new pipeline to link with Lake Huron.
        - The work will take a year or more to complete.
        - Even when linked to Lake Huron, problems with the city pipes will remain.
    - Replacing the pipes costs about $1 million per mile.
        - The city hopes to spend about $8 million in water infrastructure repairs.

- Community leaders have demanded the city return to Detroit water.
    - This would not solve the on-going infrastructure issues.
    - DWSD would charge about $1 million a month to hook up Flint again.
        - The city can't afford this.
        - The additional cost would be passed along to ratepayers.
            - Residents already are paying a lot for their water, about $150 a month.

How can the state assist?

- The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
    - Municipal water supplies are tested rigorously and regularly for more than 90 regulated contaminants, including microbial contaminants that pose an immediate public health concern.

- Gov. Snyder has awarded Flint $2 million in grants for water system infrastructure improvements, part of an overall $8 million plan to help cities through the Financially Distressed Cities, Villages, and Townships Grant Program.

- Flint is among 11 municipalities receiving grants through the program.
    - Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.
    - Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability.
    - There was $8 million appropriated for the program with a $2 million cap, per local unit.

- A $900,000 grant will allow the city to hire a contractor to perform a leak detection survey of the city water lines.
    - The city will receive a map of leak locations and an assessment of leak severity, allowing the city to prioritize leak repair.
    - The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes.

- The assessment will guide the city's water main replacement program.

- The city also was awarded $1.1 million to shut down its current Water Pollution Control Facility incinerator and replace it with new facilities which will allow for the disposal of waste in landfills.
    - The existing facilities are not up to federal Environmental Protection Agency standards.

- Dennis Muchmore and representatives from Treasury, DEQ and The Office of Urban Initiatives met with a delegation of concerned pastors to discuss the problem in early February.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, March 11, 2015 12:39 PM
To: Wurfel, Sara (GOV)
Cc: Murray, David (GOV)
Subject: RE: PIO report

Flint: They're technically still in violation of the total trihalomethane rule this quarter. All tested water in February was well below the standard, but the standard is calculated based on an average that includes the previous three quarters, and the fall 2014 results were mighty high. That'll be in the rearview with the next round of testing late spring.

In terms of next steps, not sure if you mean next steps for the city or Team RS. The city has spent tens of thousands hiring water specialists to advise them formally of what they already know and already were told by the DEQ: If you do no maintenance on your drinking water system for 40 years, it eventually begins to fail in ways big and small. However, they've gotten some positive press for hiring shiny, fancy out of state people who purport to specialize in river-based water supply challenges, so there's that.

We've encouraged them to develop a triage list of maintenance areas -- which pieces of this 500-mile system are in greatest need right now, this year and next year? Once they've got that, the next step will be figuring out how to pay for it without causing another rate increase. Honestly, the big squall in Flint (and I heard Jerry Ambrose say it early this week) comes down to the fact that folks are paying approximately double what they should for water. There's no way to adjust that in the near term, but if team RS wants to truly help, treasury could look for some funding to assist with emergency maintenance projects this spring.

Team RS continues looking at some immediate term gestures, including dropping off bottled water or filters to homes that say they've got discolored or stinky water. If someone asked me what I think is the best possible 'thing' we could do to be seen helping Flint, it's this: Treasury gave them $2 million a couple months ago. $900,000 of that was to do system-wide assessment. That project is underway. When they get results, it'll include the list of hotspots in their system that are most in need of immediate address.
They need to do some maintenance work, like scrubbing the mung out of their pipes in some areas. THAT will reduce the discolored / odorific water. If there's a way to have the state support that work, it'd be huge help.

Aquaculture: It'll be a big story at some point, but right now we're just trying to make sure the public hears about it from us first, and that they understand we're setting the bar high.

From: Wurfel, Sara (GOV)
Sent: Tuesday, March 10, 2015 5:19 PM
To: Wurfel, Brad (DEQ)
Cc: Murray, David (GOV)
Subject: RE: PIO report

Very helpful summary. Thanks much.

Few quick Qs:

Where do we stand on Flint water and next steps?

Please do keep us posted on net pen aquaculture as noted and before anything goes out publicly.

Can you share highlights/one-pager on fracking rule changes?

From: Wurfel, Brad (DEQ)
Sent: Tuesday, March 10, 2015 12:06 PM
To: Murray, David (GOV); Agen, Jarrod (GOV); Wurfel, Sara (GOV)
Cc: Holton, Jennifer (MDA); Golder, Edward (DNR); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Tommasulo, Karen (DEQ)
Subject: PIO report

Sorry I missed the meeting. Had a couple conflicts. Here's what I want to share with you:

[redacted]

3. **Flint Water:** had a meeting yesterday with a company Baird put in the room to discuss their ozone technology. It was a good conversation but a non-starter for several reasons (Flint already has an Ozone system to modify its water, this company hasn't had its system certified for use on public drinking water supplies, and the problem they propose to address is not at the water plant but throughout various sections of the distribution system). More broadly, Harvey is looking for a 'thing' the state can be doing for Flint that will position SOM / RS positively. Suggestions range from handing out home water filters (think Britta faucet mount) to passing out jugs of water. After consulting with our experts in the Drinking water program, what we've really come to at DEQ is that if there's funding from treasury (or some charitable donor foundation), the best short-term use of dollars would probably be to hire a company to 'pig' the lines in the distribution system. This is a routine maintenance activity in municipal systems that involves an in-line device under pressure that clears funk out of the lines. **The good news on Flint**: Flint EM Jerry Ambrose noted yesterday that the city has some work to do on its system in the weeks ahead; the TTHM issue is quickly going away; the 'brown water' folks are loud but really few in number; the consultants are doing their work to make suggestions to help the city prioritize its needs; and, broadly, nobody seems to be targeting the administration recently.

[redacted]

[redacted]

b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]cell

From: Wurfel, Brad (DEQ)
Sent: Friday, March 13, 2015 4:02 PM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: READ THIS PLEASE
Attachments: FOIA Request Flint Water.doc

Political flank cover out of City of Flint today regarding the spike in Legionnaires cases. See enclosed. Also, area ministers put a shot over the bow last night in MIRS with a call for Snyder to declare state of emergency there and somehow 'fix' the water situation.

It may be very advantageous to get Treasury, Gov's office, DCH, DEQ and Flint EM around a table Monday to do the following:

1. Update on what the City is doing.
2. Update on what County Health department is working on.
3. Discussion of what we might all do next.
4. Coordination of communication / messages.

Did not want to reach out to Dennis without your approval / support. Please advise.
b

From: Busch, Stephen (DEQ)
Sent: Friday, March 13, 2015 3:47 PM
To: jhenry@gchd.us
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Information Request and Documentation

Mr. Henry,

The January 27, 2015, FOIA request you provided was directed to the City of Flint, not the DEQ. The DEQ has no record of a FOIA request from your office for such information. It is our understanding that the City has responded to your FOIA request, has helped you adequately redefine your request within the City's scope of public record to address such ambiguities as "any additional areas of concern", and provided you with additional information beyond the scope of your request.

The DEQ fully recognizes the public health threat posed to individuals that contract Legionnaires' Disease with the understanding that the disease is not contracted by ingestion of potable water and therefore not regulated under the federal Safe Drinking Water Act. Your email below claims that you have explicitly explained the situation to our Department. However, since contacting our office early last October to indicate a rise in cases, we have not received any further information regarding your epidemiological investigation into this matter.

Further, conclusions that legionella is coming from the public water system without the presentation of any substantiating evidence from your epidemiologic investigation appears premature and prejudice toward that end.

It is highly unlikely that legionella would be present in treated water coming from the City of Flint water treatment plant given the treatment plant's use of ozone along with complete treatment and chlorine disinfect contact time to comply with federal surface water treatment rules for potable water. Detections of total coliform or heterotrophic bacteria in the City's public water distribution system indicate an environment where bacterial growth may be

supported. However, there is no direct correlation that can be made to the presence of legionella. While total organic carbon levels in potable water may serve as a food source for bacteria growth in private plumbing system, water temperatures in the City's distribution system are below legionella growth range, and chlorine residual levels would also limit such growth.

Our office agrees that water main breaks, water leaks, and system repairs are possible vectors for legionella to enter the public water system. These should be investigated as part of your epidemiology. DEQ staff can be made available to assist GCHD and the City regarding such matters, but to date no request by GCHD for any such meeting has been received, let alone declined as alleged in your email.

If GCHD is seeking assistance to complete its epidemiological investigation regarding this matter, such resource requests should be directed to the Michigan Department of Community Health. Our Office agrees that a multi-agency partnership would be beneficial to move forward and develop a unified response. In that respect, if our Office can be of any further assistance you may contact me directly.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

This situation has been explicitly explained to MDEQ and many of the city's officials. I want to make sure, in writing that there are no misunderstandings regarding this significant and urgent public health issue. The Trihalomethane issues "pale in comparison" to the potential public health risks of Legionella.

I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

January 27, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Water Plant Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide copies of the following:

Provide specific water testing locations and laboratory results within the City of Flint public water system for Coliform, E-coli, Heterotrophic Bacteria and Trihalomethanes from January 1, 2010 to January 27, 2015. Provide any additional water testing that has been conducted for identifying potential public health risks. Include any available mapping of the water testing areas.

Provide a map delineating the boundaries of the City of Flint water distribution system. Include any changes to the boundaries, along with corresponding dates from January 1, 2014 to January 27, 2015.

Provide a map or list of locations, detailing dead ends, pooling, low pressure and any additional areas of concern within the City of Flint water distribution system. Include any modifications to the water distribution system addressing concerns, along with corresponding dates from January 1, 2014 to January 27, 2015.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

From: Wurfel, Brad (DEQ)
Sent: Tuesday, June 09, 2015 3:45 PM
To: Brown, Jessica (GOV); Wurfel, Sara (GOV); Murray, David (GOV)
Cc: Smith, Jennifer (DCH); Wheaton, Bob (DHS)
Subject: FW: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015
Attachments: Flint VN TTHM 6_9_15.pdf

Heads up, Flint is about to get another one of those letters from us. This is once again about the Total Trihalo Methanes. They remain in violation of the standard. The water is fine, but because the standard is based on the average of four quarterly tests, it takes awhile for the 'violation' status to work its way out of the numbers.

So it may get press, but it's not indicative of actual water quality violation in the present sense.
b

From: Busch, Stephen (DEQ)
Sent: Tuesday, June 09, 2015 12:39 PM
To: Howes, Sarah (DEQ); Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ); Thelen, Mary Beth (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Attached is a copy of the Violation Notice and Public Notice Template being mailed to the City of Flint by the DEQ Office of Drinking Water and Municipal Assistance regarding an exceedance of the Maximum Contaminant Level (MCL) standard for Total Trihalomethanes at certain locations within the City's drinking water distribution system.

This violation notice is in response to updated monitoring completed in May 2015, which shows the locational running annual average for one of the City's eight compliance sampling locations continues to exceed MCL standard of 0.080 mg/L. It is however, important to note that all individual compliance sample results collected in both May and February were below the 0.080 mg/L levels.

You are being provided an electronic copy of this notice as exceedance of this drinking water standard is expected to generate inquiries from water system customers, news media, and the general public.

Sarah Howes or Maggie Pallone will be informing members of the Michigan legislature.

If you have any questions or would like any additional information, you may contact Michael Prysby, District Engineer, DEQ-ODWMA at 517-290-8817, or you may contact me at the number below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

June 9, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint – Department of Public Works
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice (VN) – Maximum Contaminant Level for Total Trihalomethanes (TTHM)
2nd Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the city of Flint (City) is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with R 325.10610, *MCL*s, of the 1979 Administrative Code, the MCL for disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City's highest TTHM LRAA, based on the last four quarters, ending June 30, 2015, is 0.094 mg/L which exceeds the standard, and at this time only one of the eight sample site locations exceed the LRAA standard of 0.080 mg/L.

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on June 1, 2015, and will continue until the TTHM LRAA is below the MCL at all sample sites.

TTHM Results (mg/L)						
	8/21/14	11/20/14	2/17/15	5/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.145**	0.059	0.0162	0.0514	0.068	0.044
DBP2 Liquor Palace 3302 South Dort Highway	**0.127**	0.033	0.0168	0.0635	0.060	0.044
DBP3 North Flint Auto 6204 North Saginaw St.	**0.118**	0.041	0.0149	0.0452	0.055	0.037
DBP4 University Market 2501 Flushing Road	**0.196**	**0.094**	0.0245	0.0598	**0.094**	0.059
DBP5 Taco Bell 3606 Corunna Road	**0.181**	0.034	0.0151	0.0547	0.072	0.040
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.144**	0.054	0.0192	0.0605	0.069	0.048
DBP7 Salem Housing 3216 MLK Boulevard	**0.112**	0.050	0.0285	0.0727	0.066	0.056
DBP8 BP Gas Station 822 South Dort Highway	**0.112**	0.036	0.0199	0.0461	0.054	0.037

We are encouraged by the results from the most recent round of compliance samples collected on May 18, 2015, which again show individual TTHM levels below 0.080 mg/L at all locations throughout the City's system. Operational Evaluation Reports from December 2014, February 2015, and May 2015, have identified possible causes and corrective measures for the previous elevated TTHM levels which we encourage the City to continue implementing. These modifications have likely contributed in part to the reduction in TTHM levels reported for the most recent quarter in comparison to levels in May 2014, and suggest the City may be able to achieve compliance with the TTHM standard at all sites by continuing these efforts.

Our office is currently reviewing the Operational Evaluation Report dated May 29, 2015, and will provide the City and their consultant with comments, as needed, to help address this MCL violation.

Further, the TTHM operational evaluation level (OEL) calculated in accordance with R 325.10719l, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, is now below the 0.080 mg/L operational evaluation trigger at all eight sample site locations. However, our office is requesting that an operational evaluation again be conducted incorporating the most recent sample results, given the increase in TTHM levels from February 2015 results, and that the next monitoring period of August has been identified as the City's peak month for TTHM levels. **Please provide our office with an updated Operational Evaluation Report by Monday, August 31, 2015.**

If you have any other factual information you would like us to consider regarding the violation identified in this VN, please provide them in a written response by June 23, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice (PN) as soon as practical, but no later than thirty (30) days after the supplier learns of this type of violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample PN which contains the minimum required language. The City is encouraged to include additional information regarding its response efforts to this violation. **Please notify your consumers by July 1, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the PN**. This violation must also be included in your 2015 Consumer Confidence Report, due by July 1, 2016. The PN must be repeated every quarter until you no longer exceed the TTHM standard. Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.

We anticipate and appreciate your continued cooperation in resolving this matter. If you have any questions regarding this VN, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov; or at DEQ, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality
Analyst
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

Enclosure

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glascow, City of Flint
Genesee County Health Department
Ms. Liane Shekter Smith, DEQ
Mr. Richard Benzie, DEQ
Mr. Stephen Busch, DEQ

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (August 21, November 20 of 2014, and February 17 & May 18 of 2015). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 micro grams per liter (µg/L). The location reporting the highest TTHM level was 94 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.

- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015. Our most recent individual sample results were all less than the 80 µg/L standard, however since compliance is calculated using a locational running annual average (LRAA) of the most recent four quarters, we are still out of compliance with the MCL at one of eight locations.

For more information, please contact Mr. Brent Wright at 517-787-6537, or the Flint Water Plant at 4500 North Dort Highway, Flint, Michigan 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice/certification must be sent to the Department of Environmental Quality.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, July 22, 2015 10:21 PM
To: Wyant, Dan (DEQ)
Cc: Anderson, Madhu (DEQ); Pallone, Maggie (DEQ); Epkey, Amy (DEQ); McCauley, Sara (GOV)
Subject: Re: Flint

I'm not sure what Dennis is receiving. Is he referring to the EPA samples on one home?

As a requirement for the change in water supply sources, 100+ homes are picked and tested in each of two statutorily required sampling exercises. To meet the standard for lead and copper, 90% must pass each round. I believe three homes in the December tests were high, and of the 70 tests we had processed from the Jan - June testing, 5 were high. Busch seemed confident they will meet the standard.

We aren't talking about lead in the water supply here. We are talking about people with lead in their premise plumbing -- old lead connection pipes between their homes and the city pipes, folks with lead pipes in their homes, or folks with old copper pipes sweated together with lead solder.

The reason testing is done is to ensure that the Ph of the water is not reacting with lead in premise plumbing. If less than 10 percent of the served population is experiencing the problem, the system is in compliance with the federal standard.

What of the folks who test high? The city contacts them to let them know they have elevated levels and should get a plumber to check and replace their lead transmission hardware.

The ACLU's fear campaign on this issue is an embarrassment.

It would help perhaps to get a fresh briefing from Steve Busch with final numbers from the recent testing. And then maybe clarification about what the chief wants us to do. The options are not many.
b

Sent from my iPhone

On Jul 22, 2015, at 3:07 PM, Wyant, Dan (DEQ) <WyantD@michigan.gov> wrote:

> Sent from my iPhone
>
> Begin forwarded message:

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: July 22, 2015 at 3:04:51 PM EDT
To: "Wyant, Dan (DEQ)" <WyantD@michigan.gov>
Cc: "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>
Subject: Flint

I'm frustrated by the water issue in Flint. I really don't think people are getting the benefit of the doubt. Now they are concerned and rightfully so about the lead level studies they are receiving from the DEQ samples. Can you take a moment out of your impossible schedule to personally take a look at this? These folks are scared and worried about the health impacts and they are basically getting blown off by us (as a state we're just not sympathizing with their plight).

From: Wurfel, Brad (DEQ)
Sent: Friday, July 31, 2015 2:32 PM
To: Wyant, Dan (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Cc: Karen Tommasulo; Wurfel, Sara (GOV)
Subject: Fwd: Updated Memo on Water Coalition Questions - July 29
Attachments: Flint Testing and EBLLs_2.xlsx; ATT00001.htm

Interesting.

Sent from my iPhone

Begin forwarded message:

From: "Lyon, Nick (DCH)" <LyonN2@michigan.gov>
Date: July 31, 2015 at 10:56:42 AM EDT
To: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Clement, Elizabeth (GOV)" <clemente@michigan.gov>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>
Cc: "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>, "Wisniewski, Wendy (GOV)" <wisniewskiw@michigan.gov>, "Grijalva, Nancy (DCH)" <GrijalvaN@michigan.gov>
Subject: Re: Updated Memo on Water Coalition Questions - July 29

Our Public Health staff followed up a bit more on the lead question. Below is their email update to me.

From: Grijalva, Nancy (DCH)
Sent: Wednesday, July 29, 2015 11:23 AM
To: Lyon, Nick (DCH)
Subject: FW: Director's Office Assignment -- Flint - need update asap

FYI.....

-----Original Message-----
From: Peeler, Nancy (DCH)
Sent: Tuesday, July 28, 2015 2:57 PM
To: Anderson, Paula (DCH); Miller, Corinne (DCH); Travis, Rashmi (DCH); Moran, Susan (DCH); Grijalva, Nancy (DCH); Fink, Brenda (DCH)
Cc: Priem, Wesley F. (DCH); Dykema, Linda D. (DCH); Bouters, Janese (DCH); Barr, Jacqui (DCH)

Subject: RE: Director's Office Assignment -- Flint - need update asap

I apologize for the delay in responding more specifically to this assignment, it took some time to review our Childhood Lead Poisoning Prevention program data to see if it might contribute to the understanding of the situation in Flint with their water supply. Here is what we found:

We looked at lead testing results for May 2014-April 2015, which is the 12 month time frame just after Flint started drawing their water from the river (water source changed in April 2014).

We compared lead testing rates and lead testing results to the same time frame for the previous 3 years, to see if there were any patterns that suggested that there were increased rates of lead poisoning after the water supply was switched. Per the attached charts –

- Lead testing rates remained about the same from year to year (chart on the right).
- There was a spike in elevated blood lead tests from July-September 2014 (chart on the left, gold line).
- However that pattern was not terribly different from what we saw in the previous three years, especially in 2011-2012 (we are working with our Epidemiologist to statistically verify any significant differences).
- We commonly see a 'seasonal effect' with lead, related to people opening and closing windows more often in the summer, which disturbs old deteriorating paint on the windows, sills and sashes. Window fans frequently blow and spread the lead dust from the deteriorating paint to other parts of the room/house. We suspect that the summer data spike may be related to this effect.
- If the home water supply lines and/or river water were contributing to elevated blood lead tests, we expected that the increased rates would extend beyond the summer, but they drop quite a bit from September to October, stayed low over the winter, and are just starting to tail up again in the spring of 2015.

So upon review, we don't believe our data demonstrates an increase in lead poisoning rates that might be attributable to the change in water source for Flint. We recognize that lead exposure via the water is only a small piece of what may be happening for families in Flint, however, we hope the information is helpful.

Nancy Peeler

From: Muchmore, Dennis (GOV)
Sent: Wednesday, July 29, 2015 9:02 AM
To: Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: RE: Updated Memo on Water Coalition Questions - July 29

I think this information is very helpful. It will not answer the main question about the quality of the water (DEQ is working on that through Brad I believe), and the color and smell of the present water, but it does get us to the answers to the less subjective issues. Frankly, the only way the issues will be totally resolved is when the KWA comes on line and the water is perceived to be cleaner and healthier.
I am somewhat surprised that the leadership in Flint has not responded better to the community questions, which don't seem unreasonable at all. Seems like Harvey has a better network into some of the neighborhoods than the city does. The KWA PR department definitely needs to do some outreach or they're headed down the same road as DWSD. Do you know if they go out on a regular basis to the community and talk about the rates, costs, etc.?

From: Workman, Wayne (TREASURY)
Sent: Wednesday, July 29, 2015 8:36 AM
To: Muchmore, Dennis (GOV); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: FW: Updated Memo on Water Coalition Questions - July 29
Importance: High

All, Attached is a memo and water rate summary answering several of the questions raised by the Flint pastors. Please let me know if you have any questions. Wayne

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Cline, Richard (Treasury)
Sent: Wednesday, July 29, 2015 8:21 AM
To: Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury); Byrne, Randall (Treasury)
Subject: Updated Memo on Water Coalition Questions - July 29
Importance: High

Wayne,

Attached is the water rate table you asked for and I have updated the memo to reference this as an attachment.

If you need anything else, please let me know.

Note that Rob, Randy and I will be in Benton Harbor for a portion of today conducting their annual RTAB evaluation.

Eric Cline | Department Manager
State of Michigan | Michigan Department of Treasury | Office of Fiscal Responsibility
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922

Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228
E-mail cliner1@michigan.gov

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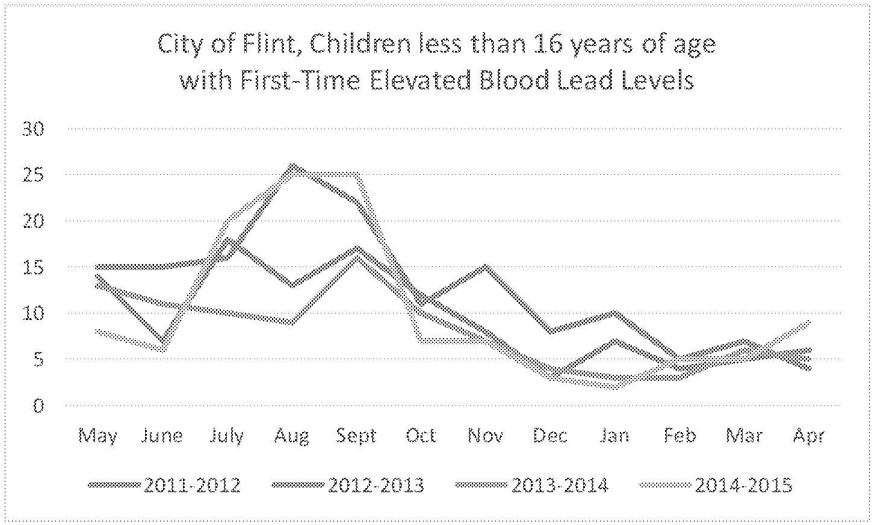
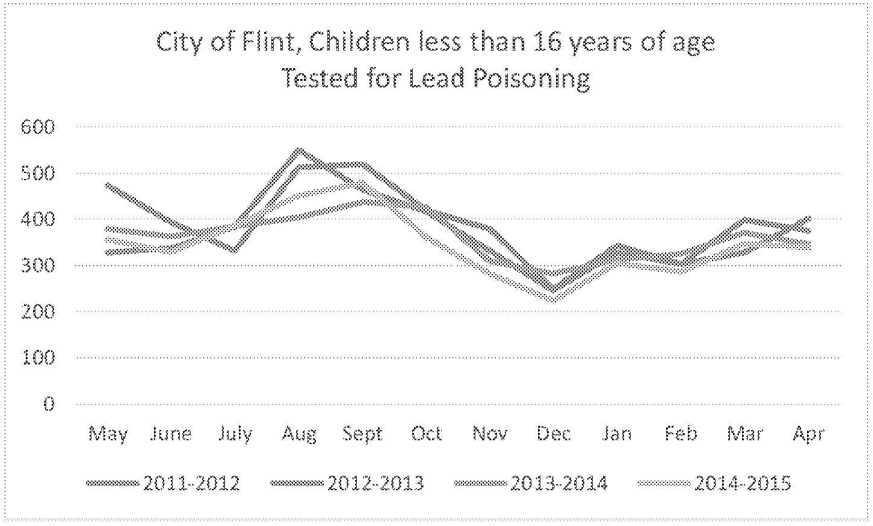


	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011-2012	15	15	16	26	22	11	15	8	10	5	7	4
2012-2013	14	7	18	13	17	12	8	3	7	4	5	6
2013-2014	13	11	10	9	16	10	7	4	3	3	6	5
2014-2015	8	6	20	25	25	7	7	3	2	5	5	9



	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011-2012	474	393	332	513	520	420	379	249	343	303	399	375
2012-2013	328	338	383	550	464	417	332	246	328	303	328	402
2013-2014	380	363	385	404	438	427	310	283	313	325	371	346
2014-2015	356	329	386	452	480	361	283	224	305	287	348	339

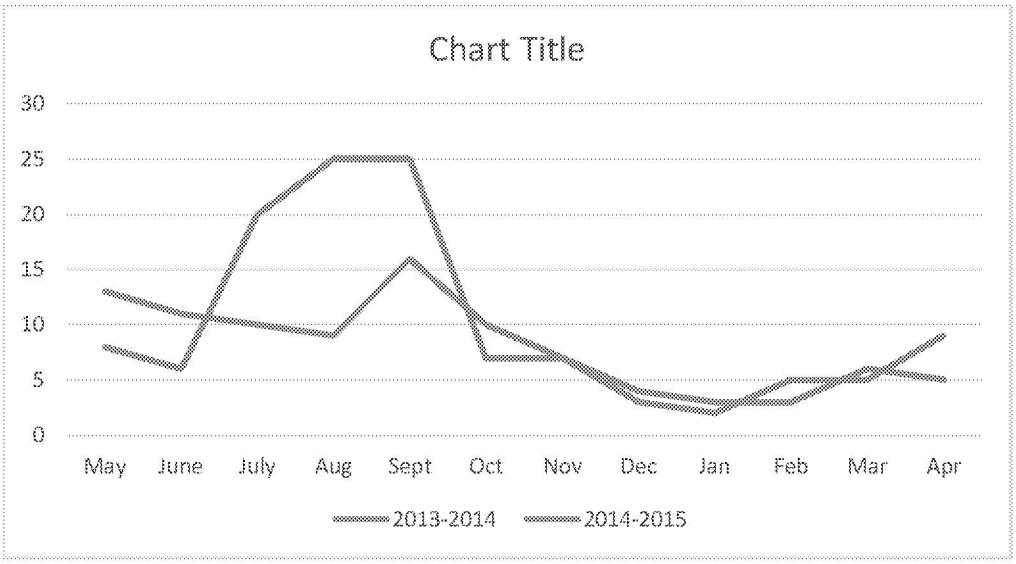


Chart Title
30
25
20
15
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5
0
May
June
July
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
2013-2014
2014-2015

From: Wurfel, Brad (DEQ)
Sent: Thursday, September 10, 2015 3:13 PM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Reporter seeking a response to Virgnia Tech's Flint Water Study findings

Importance: High

Need a phone call to discuss this with either of you.

Thanks.

b

From: Curt Guyette [mailto:cguyette@aclumich.org]
Sent: Thursday, September 10, 2015 2:41 PM
To: Wurfel, Brad (DEQ)
Subject: Reporter seeking a response to Virgnia Tech's Flint Water Study findings
Importance: High

Dear Mr. Wurfel,

After testing more than 250 homes in Flint, researchers at Virginia Tech have continued to find dangerously high levels of lead in many of the homes being sampled.

They are unequivocal in their findings, stating that: "Flint has a very serious lead in water problem."

These results run contrary to the city and MDEQ's assertions that the city of Flint is in compliance with U.S. EPA Lead and Copper Rule compliance standards. In fact, based on Virginia Tech's results – which are much more extensive, having tested nearly four times as many homes as the city tested during the first half of 2015, and the VT researchers have not specifically target high-risk homes, as the city is required to do for the LCR monitoring – the city is actually well out of compliance.

I was hoping you would be able to provide the MDEQ's position regarding VT researchers' purported findings, and the contradictory conclusions..

Virginia Tech's methodology and results have been posted on a web site dedicated to the project (flintwaterstudy.org/), so it is clear from their end how they have approached this project, and exactly what they've done, and what they've found.

It would be very helpful to have the MDEQ's views on all this for my upcoming story.

I am working on a deadline and would very much appreciate a response by the end of the day tomorrow, Sept. 11.

I appreciate any help you can provide in my reporting on this very important public health issue.

Sincerely,

Curt

From: Kaffer, Nancy <nkaffer@freepress.com>
Sent: Friday, September 25, 2015 2:54 PM
To: Wurfel, Sara (GOV)
Subject: RE: Flint water

Hi Sara - A little confused by your response. Not sure if Darnell Earley was EM when the decision was made to use Flint River -- It may have been Michael Brown? He was EM when the decision was made to join the KAregnondi Water Authority but I'm not sure about the decision to switch to Flint River water and stop using DWSD, but regardless, he's an EM appointed by the governor -- but I'm unclear why you guys would sign off on something as important about the integrity of an entire city's water supply if you had "severe reservations"? Any light you could shed on that would be much appreciated.

Also, not clear what the Genesee Board of Commissioners has to do with it? They're a separate water customer and have continued to use DWSD while Karegnondi is under construction.

Our data analyst has been in contact with HHS. Story on that is forthcoming.

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

-----Original Message-----
From: Wurfel, Sara (GOV) [mailto:WurfelS@michigan.gov]
Sent: Thursday, September 24, 2015 4:26 PM
To: Kaffer, Nancy <nkaffer@freepress.com>
Subject: Re: Flint water

Just so you know ... that's not accurate history, Nancy. This change was pushed and direct request of Genesee Co Board of Commissioners AND city council (7-1) and mayor at the time. We had severe reservations about switch but ultimately was nearly unanimous request from local local level that Treasury signed off on. (And FYI double checking, but nearly certain EM at time was not Darnell E.)

Not that any of that matters, Nancy.
The bottom line is that we have been working hard to do everything possible to play a supportive role and work in collaborative fashion across all levels of government with community, faith & business leaders, residents, etc.

Protecting public health is paramount and safe, clean, accessible drinking water is essential. That's what we solely focused on helping ensure.

Highly recommend you reach out to state Health & Human Services team for how this data set was spliced and diced. That's key to understanding. They can walk through for you and Freep team.

Thanks much,
SW

Sent from my iPhone

On Sep 24, 2015, at 3:37 PM, Kaffer, Nancy <nkaffer@freepress.com<mailto:nkaffer@freepress.com>> wrote:

Hey Sara - comment on this elevated lead in the Flint water system? Specifically because the Flint EM is the one who made the decision to hook up to the Flint ... the same Flint EM who is now DPS EM, correct?

Nancy Kaffer
Columnist
Detroit Free Press
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@nancykaffer, @abettermi

From: Kaffer, Nancy [nkaffer@freepress.com]
Sent: Friday, September 25, 2015 4:14 PM
To: Wurfel, Sara (GOV)
Subject: FW: Flint water

Deadline question for a column due today. :)

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From: Kaffer, Nancy <nkaffer@freepress.com>
Sent: Friday, September 25, 2015 4:16 PM
To: Wurfel, Sara (GOV)
Subject: RE: Flint water

Which, I should clarify, means by 5p.

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

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Sent from my iPhone

On Sep 24, 2015, at 3:37 PM, Kaffer, Nancy <nkaffer@freepress.com<mailto:nkaffer@freepress.com>> wrote:

Hey Sara - comment on this elevated lead in the Flint water system? Specifically because the Flint EM is the one who made the decision to hook up to the Flint ... the same Flint EM who is now DPS EM, correct?

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan<http://www.freep.com/abettermichigan>
313-222-6585
@nancykaffer, @abettermi

From: Murray, David (GOV)
Sent: Friday, September 25, 2015 4:28 PM
To: Wurfel, Sara (GOV)
Subject: RE: Flint water

Why the County Commission is involved:

http://wcrz.com/genesee-county-to-pay-flint-1-million-for-river-water-as-backup-source/

From: Wurfel, Sara (GOV)
Sent: Friday, September 25, 2015 4:22 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Fwd: Flint water

Calling you about this one ...

Sent from my iPhone

Begin forwarded message:

> **From:** "Kaffer, Nancy" <nkaffer@freepress.com>
> **Date:** September 25, 2015 at 4:14:19 PM EDT
> **To:** "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
> **Subject: FW: Flint water**
>
> Deadline question for a column due today. :)
>
> _____
> Nancy Kaffer
> Columnist
> Detroit Free Press
> www.freep.com/abettermichigan
> 313-222-6585
> @nancykaffer, @abettermi
>
> -----Original Message-----
> From: Kaffer, Nancy
> Sent: Friday, September 25, 2015 2:54 PM
> To: 'Wurfel, Sara (GOV)' <Wurfels@michigan.gov>
> Subject: RE: Flint water
>
> Hi Sara - A little confused by your response. Not sure if Darnell Earley was EM when the decision was made to use Flint River -- It may have been Michael Brown? He was EM when the decision was made to join the KAregnondi Water Authority but I'm not sure about the decision to switch to Flint River water and stop using DWSD, but regardless, he's an EM appointed by the governor -- but I'm unclear why you guys would sign off on something as important about the integrity of an entire city's water supply if you had "severe reservations"? Any light you could shed on that would be much appreciated.

Also, not clear what the Genesee Board of Commissioners has to do with it? They're a separate water customer and have continued to use DWSD while Karegnondi is under construction.

Our data analyst has been in contact with HHS. Story on that is forthcoming.

Nancy Kaffer
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-----Original Message-----
From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Thursday, September 24, 2015 4:26 PM
To: Kaffer, Nancy <nkaffer@freepress.com>
Subject: Re: Flint water

Just so you know ... that's not accurate history, Nancy. This change was pushed and direct request of Genesee Co Board of Commissioners AND city council (7-1) and mayor at the time. We had severe reservations about switch but ultimately was nearly unanimous request from local local level that Treasury signed off on. (And FYI double checking, but nearly certain EM at time was not Darnell E.)

Not that any of that matters, Nancy.
The bottom line is that we have been working hard to do everything possible to play a supportive role and work in collaborative fashion across all levels of government with community, faith & business leaders, residents, etc.

Protecting public health is paramount and safe, clean, accessible drinking water is essential. That's what we solely focused on helping ensure.

Highly recommend you reach out to state Health & Human Services team for how this data set was spliced and diced. That's key to understanding. They can walk through for you and Freep team.

Thanks much,
SW

Sent from my iPhone

On Sep 24, 2015, at 3:37 PM, Kaffer, Nancy
<nkaffer@freepress.com<mailto:nkaffer@freepress.com>> wrote:

Hey Sara - comment on this elevated lead in the Flint water system? Specifically because the Flint EM is the one who made the decision to hook up to the Flint ... the same Flint EM who is now DPS EM, correct?

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@nancykaffer, @abettermi

From: Pallone, Maggie (DEQ)
Sent: Friday, October 02, 2015 9:56 AM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Lasher, Geralyn (DHHS); Wyant, Dan (DEQ); Hertel, Elizabeth (DHHS)
Cc: Tommasulo, Karen (DEQ)
Subject: Flint water - talking points (draft 151001) IMPORTANT UPDATES
Attachments: Flint water - talking points (draft 151001).docx

PLEASE read and note new bullets on a few of these. Thanks.
(Maggie and Brad)

Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switching to the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015, which forces the city to complete its corrosion control optimization.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
    - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
    - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
    - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
    - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
    - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
    - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
    - We encourage anyone with a concern to get their water tested.
    - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**

- A fully optimized corrosion control system means the insides of pipes are coated to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
- This is a helpful step that can minimize lead exposure system-wide, and we're pleased the city is moving to take this step.
- If asked: Phosphate was not initially required because the city was using a lime softener, one of many corrosion control options, while they performed federally required rounds of water tests to determine their optimization options and needs.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
  - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
  - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
  - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
  - This is a problem in communities statewide, and one we want to address with a long-term solution.
  - The state and EPA are working with Congressman Kildee to find a way for the city to access Drinking Water Revolving Loan funds for this work.

- **Expedite completion of Karegnondi Water Authority.**
  - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
  - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
  - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.

- She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
- Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
  - As an additional precaution, water filters will be available to Flint water customers.
  - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water they feel confident drinking, cooking, or using for formula.

- **Expand a comprehensive lead education initiative.**
  - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
  - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.
    - To flush your pipes, run the water until it is as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
    - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
  - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, November 17, 2015 1:54 PM
To: Wurfel, Sara (GOV)
Attachments: Flint Water Bills; Fwd: Flint Water Supply Alternatives; Fwd: Flint Water; KWA

From: Stibitz, Brom (DTMB)
Sent: Monday, March 04, 2013 4:00 PM
Subject: Flint Water Bills
Attachments: Water Forum - Final.ppt; WATER RATES deposits.doc

Follow Up Flag: Follow up
Flag Status: Flagged

Dennis,

There is some information attached on the Flint water issue you asked us about. I summarize a few of the key points:

- The water system has been running at deficits for years. When the previous EFM left the City in 2004, the water system has a reserve of approximately $60 million. When Mike Brown was appointed, this had turned into a $20 million deficit due to years of not passing along to consumers the rate increases of over 10% hitting the system from DWSD. Slides 5 & 6 of the attached power point show this pretty dramatically.
- Substantial increases over the past few years are an attempt to reflect the actual costs of running the system.
- Another concern raised by DHS was the increase in the deposit for rental properties. This was necessary because renters paid the previous $100 deposit, then racked up water bills in excess of this amount and walked away. Of the affidavits currently out there, 82% are past due. I would also note that this is not mandatory, it is only required if a landlord is not willing to put the water bill in their name.
- The bottom line is that they realize it is an issue, but the General Fund doesn't have the money to run general City operations, much less subsidize water rates.

The two page word document (attached) provided by the EFM gives you a good overview of what is going on. They believe that a switch to KWA is part of the solution for high water rates in the City.

Brom

City of Flint

Water Forum

5/31/2012

City Of Flint Water Forum

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Improvements for City of Flint Water System 13

City Of Flint Water History Facts

Current Treatment Plant was put into service in 1954.

Current 72" main pipeline was completed in 1970.

Flint signed a 30 year contract with Detroit Water and Sewer Department in the mid 1960's.

The contract with DWSD has expired and we are currently operating on a yearly extension.

In 2006 Flint completed a $48,000,000 upgrade of the existing Water Plant (required by the MDEQ & for backup only).

Flint's Water & Sewer System is approximately a $300,000,000 Enterprise.

Flint's Water & Sewer System is designed to deliver water to over 200,000 people with over 1,500 miles of infrastructure.

Flint's most recent census count shows a population of approximately 102,000 in 2010.

Flint's census population in 2000 was approximately 124,000.

The water system had over 45,000 customers in June of 1999.

The water system had just over 36,000 customers by June 2011.

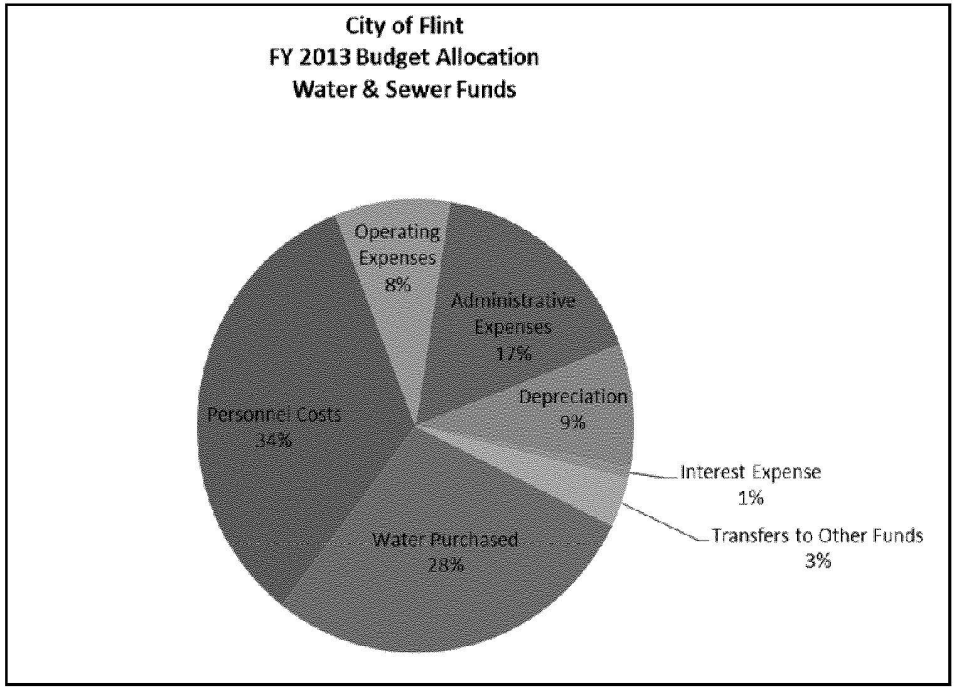
The "Fixed Costs" that must be covered to maintain the system and deliver quality water have increased over time.

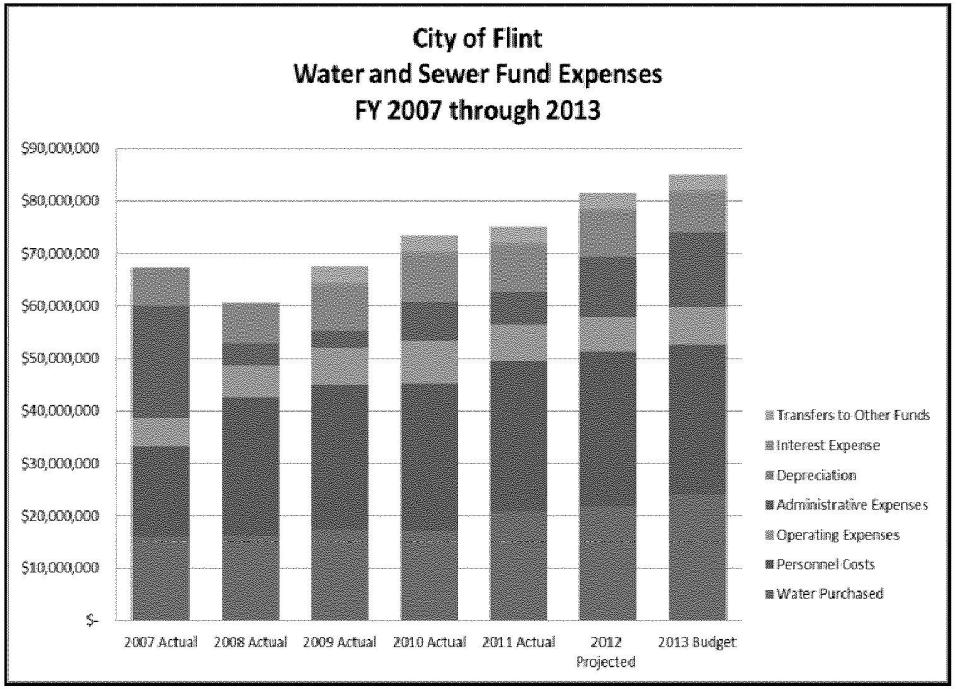
City Of Flint
Most Frequently Asked Questions about Water

- ❑Why are the water rates so high ?
- ❑How does my water bill work (Explanation of charges) ?
- ❑Why do others in the area pay less for the same amount of water ?
- ❑Where has all of the water and sewer fund money gone ?
- ❑What do I do if I think my bill is incorrect ?
- ❑What effect does leakage or theft have on my bill ?
- ❑How can I report water theft ?
- ❑Why don't we go back to using the Flint River like we once did ?

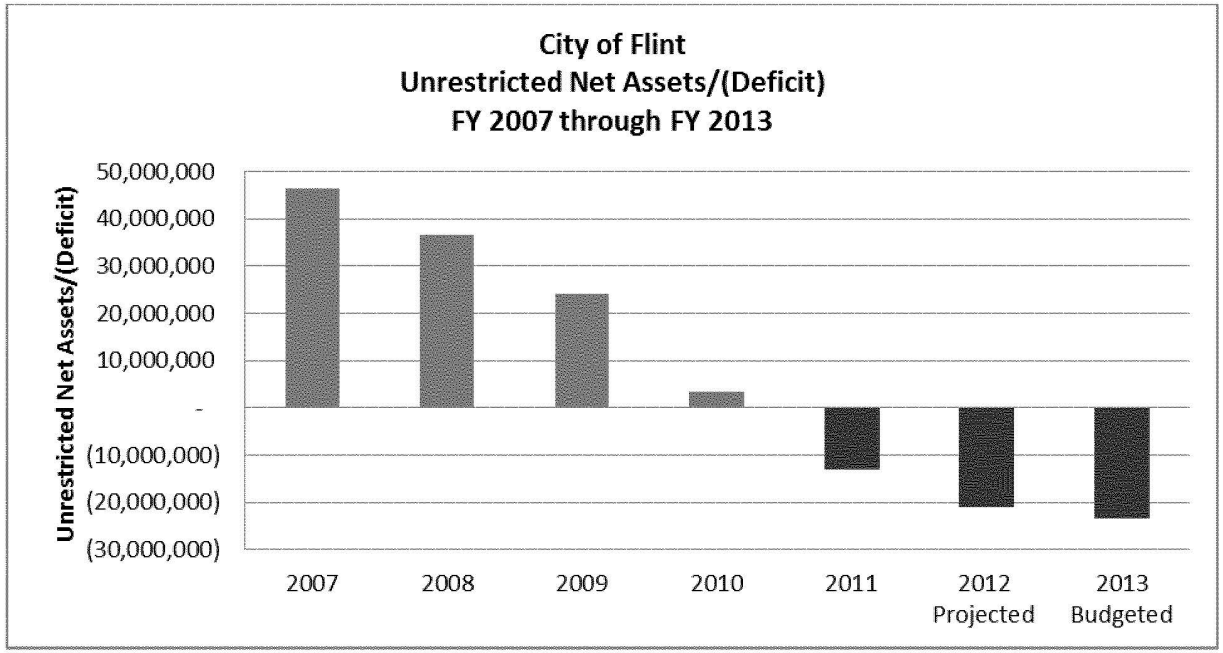
City of Flint

Budget Allocation and Fund Expenses

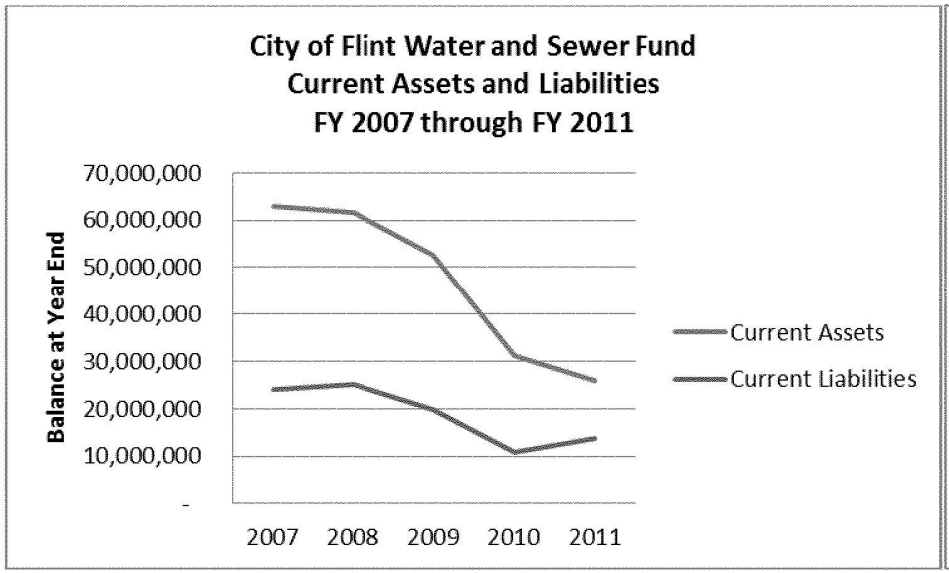


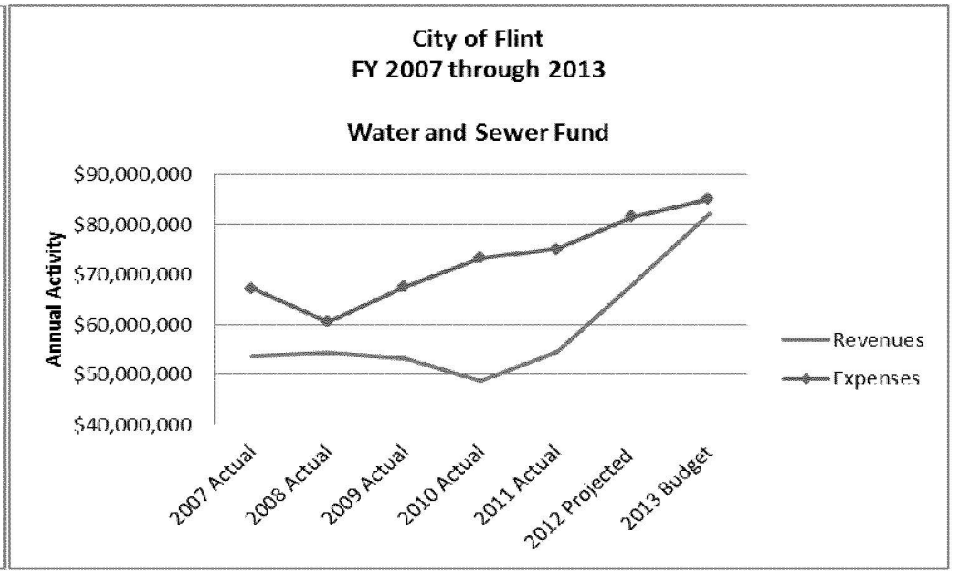


	Audited						
	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Projected	2013 Budget
Operating Revenues	51,090,679	51,100,332	51,906,553	47,926,589	54,385,644	67,983,044	81,734,552
Other Revenues	2,627,939	3,274,450	1,442,383	764,886	68,645	126,670	455,867
Annual Revenues	53,718,618	54,374,782	53,348,936	48,691,475	54,454,289	68,109,714	82,190,419
Water Purchased	16,052,006	16,297,871	17,421,663	17,103,752	20,919,987	21,756,787	24,031,417
Personnel Costs	17,292,444	26,302,590	27,591,206	28,149,946	28,618,817	29,640,499	28,546,350
Operating Expenses	5,355,638	6,145,119	6,950,534	8,146,390	6,917,964	6,420,260	7,259,290
Administrative Expenses	21,300,900	4,229,382	3,403,231	7,327,630	6,221,627	11,465,462	14,140,047
Depreciation	7,217,142	7,132,870	8,364,022	8,854,889	8,689,809	8,615,000	7,500,000
Interest Expense	86,632	485,499	868,031	812,270	754,890	705,150	644,314
Transfers to Other Funds	-	-	2,990,000	2,990,000	2,990,000	2,990,000	2,990,000
Annual Expenses	67,304,762	60,593,331	67,588,687	73,384,877	75,113,094	81,593,158	85,111,418



	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Projected	2013 Budget
Revenues	53,718,618	54,374,782	53,348,936	48,691,475	54,454,289	68,109,714	82,190,419
Expenses	67,304,762	60,593,331	67,588,687	73,384,877	75,113,094	81,593,158	85,111,418

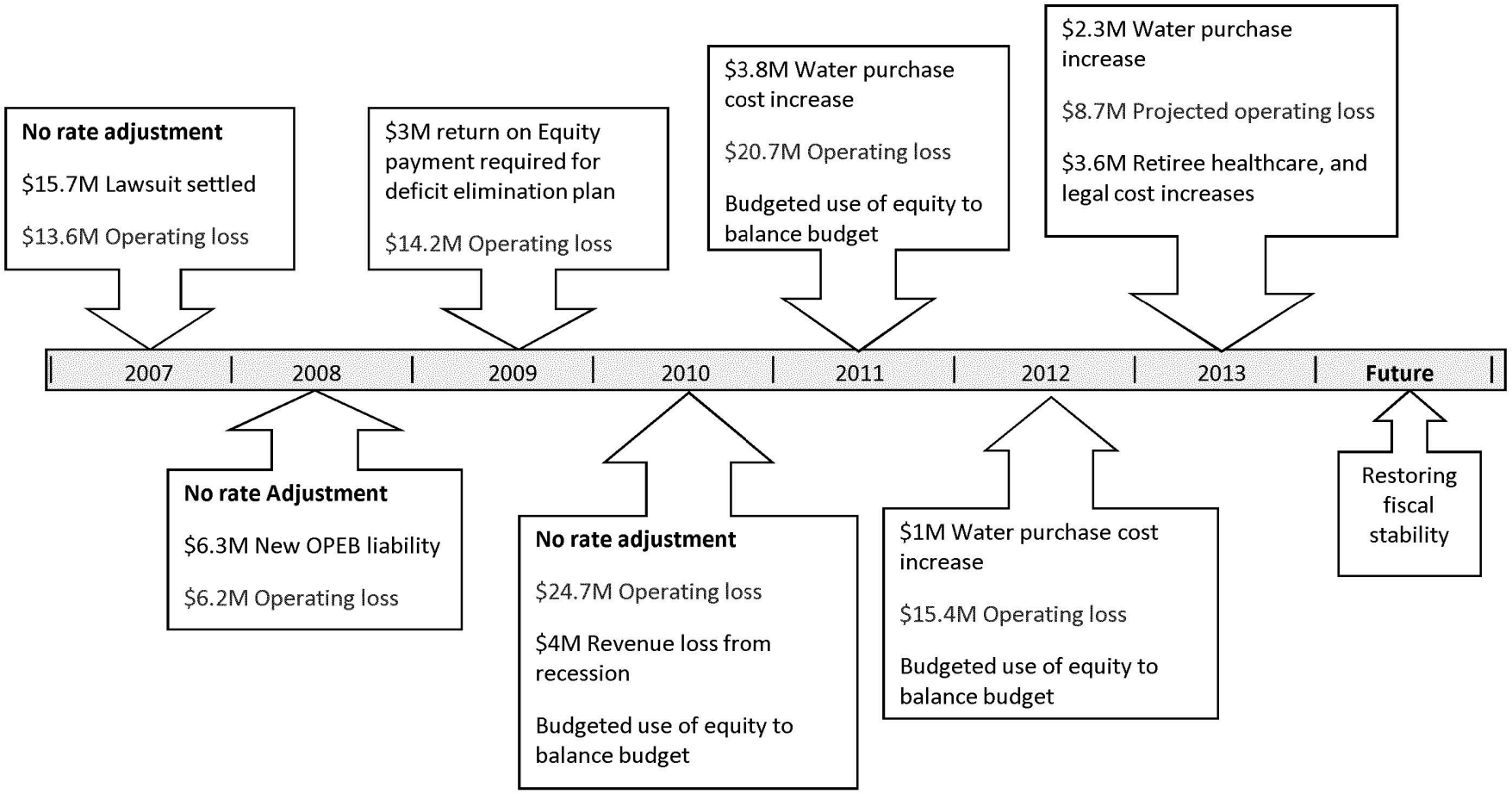




City of Flint

Recent Timeline of Water and Sewer Funds

FY 2007 through 2013



City of Flint- Water and Sewer System Additional Asset / Revenue Data

The average annual residential water sewer bill in FY2005 was less than $700 annually
The average annual residential water/ sewer bill in FY13 will be nearly $1,700

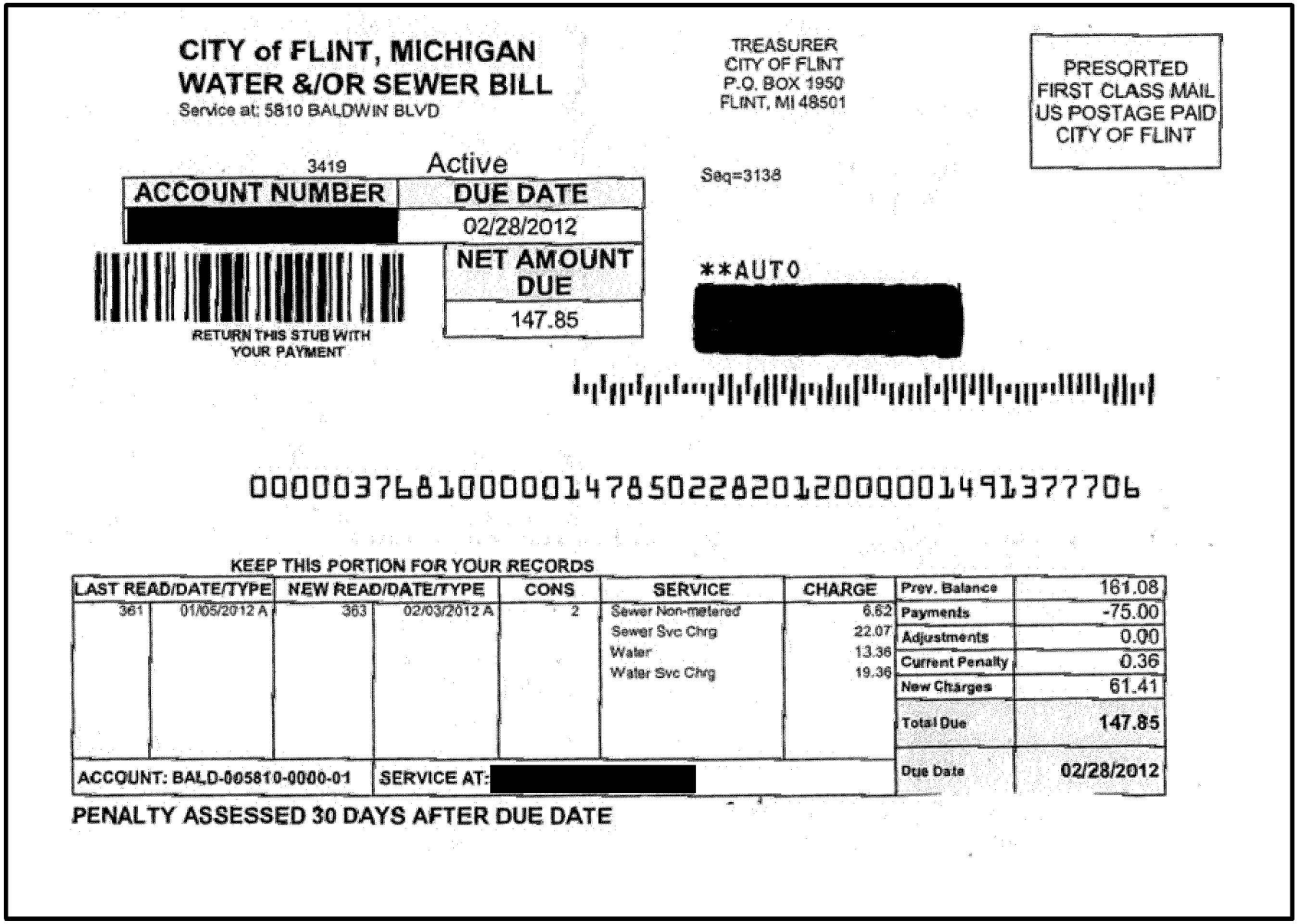
Expenses have exceeded revenues every year since 2006:

FISCAL YEAR	Rate Base	Revenues	Expenses	Revenues Minus Expenses	Unreserved System Equity	FACTORS IMPACTING SOLVENCY			COST IMPACT
2006	2005	$55,204,242	$50,933,792	**$4,270,450**	**$60,340,013**				
									(millions)
2007	2005	$53,856,857	$67,442,993	($13,586,136)	$46,399,452	No rate adjustment			??
						$15.7 million lawsuit settlement	15.7	0	$15.7
2008	2005	$54,374,781	$60,593,331	($6,218,550)	$36,482,488	No rate adjustment			??
						OPEB liabilities added	3.6	2.7	$6.3
2009	2009	$53,488,463	$67,728,218	($14,239,755)	$24,023,065	ROE payment added as part of City [	1.9	1.1	$3.0
2010	2009	$48,820,329	$73,513,725	($24,693,396)	$3,531,768	No rate adjustment			??
						Use of retained earnings budgeted	12.5	0.5	$13.0
						Revenue lost due to recession	2	2	$4.0
2011	2011	$54,527,079	$75,185,879	($20,658,800)	($12,866,607)	Use of retained earnings budgeted	7.1	3.5	$10.6
	2011					Water purchase cost increase	0	3.8	$3.8
2012		$68,279,187	$83,682,840	($15,403,653)	($20,884,122)	Use of retained earnings budgeted	5.1	0	$5.1
						Water purchase cost increase	0	0.8	$0.8
2013	2013	$82,220,420	$90,970,420	**($8,750,000)**	**($23,379,690)**	Water purchase cost increase	0	2.3	$2.3
						RHC/Legal/Admin Cost Allocation	2.1	1.5	$3.6
				($99,279,840)					$68.2

Calculation of Water and Sewer Rates for FY13 Budget

March, 2012:

	Expense Projection Based on FY12 Costs	Revenue Projection Based on FY12 Receipts	Difference Between Projected Revenues and Expenses	Rate Increase Necessary To Close Gap
Water	$49.9	$44.4	-$5.5	12.4%
Sewer	$31.0	$21.4	-$9.6	44.9%
TOTAL	$80.9	$65.8	-$15.1	22.9%



CITY of FLINT, MICHIGAN
WATER &/OR SEWER BILL
Service at: 5810 BALDWIN BLVD

TREASURER
CITY OF FLINT
P.O. BOX 1950
FLINT, MI 48501

PRESORTED
FIRST CLASS MAIL
US POSTAGE PAID
CITY OF FLINT

3419 Active

ACCOUNT NUMBER	DUE DATE
[redacted]	02/28/2012
	NET AMOUNT DUE
	147.85

RETURN THIS STUB WITH YOUR PAYMENT

Seq=3138

**AUTO [redacted]

00000376810000014785022820120000014913777O6

KEEP THIS PORTION FOR YOUR RECORDS

LAST READ/DATE/TYPE		NEW READ/DATE/TYPE		CONS	SERVICE	CHARGE
361	01/05/2012 A	363	02/03/2012 A	2	Sewer Non-metered	6.62
					Sewer Svc Chrg	22.07
					Water	13.36
					Water Svc Chrg	19.36

Prev. Balance	161.08
Payments	-75.00
Adjustments	0.00
Current Penalty	0.36
New Charges	61.41
Total Due	147.85
Due Date	02/28/2012

ACCOUNT: BALD-005810-0000-01 SERVICE AT: [redacted]

PENALTY ASSESSED 30 DAYS AFTER DUE DATE

CITY OF FLINT
DEPARTMENT OF FINANCE

Customer Service Center

Dayne Walling
Mayor

Douglas Bingaman
Treasurer

CITY OF FLINT
WATER NON-PAYMENT TURN-OFF POLICY

1. Water services to any customer may be shut off if the account is not paid until after 30 days after the due date. (City ordinance 46-52 (h))

2. Non-payment turn-offs are done only Monday through Thursday. The Customer Service Center does not schedule non-payment turn-offs on Fridays, Saturdays, Sundays, or most recognized holidays.

3. Illegal usage, broken payment arrangements and NSF (non-sufficient funds) turn-offs are done at any time without additional notice.

4. Turn-off notices are mailed to delinquent customers fifteen (15) days before actual turn-off.

5. The water customer is responsible for maintenance of all plumbing in the premises including connection to City water mains or sewer lines.

6. If a customer disputes a water bill and is unable to resolve the issue with Customer Service personnel, the customer may request an administrative review. Further information on any water account may be obtained by calling (810) 766-7015 or visiting the Customer Service Center at 1st Floor, City Hall, 1101 S. Saginaw St.

Preliminary Options for Future City of Flint Water Sources

Consider a New Negotiated Contract with Detroit Water and Sewer Department

PRO'S	CON'S
No upfront capital costs	Lack of control over new / fixed changes
Possibility to negotiate a lower rate	Past practices
Ability to "Blend" water sources to further control costs	

Consider a Contract with the Karegnondi Water Authority

PRO'S	CON'S
Voting member of KWA board	Capital cost (debt service)
Ability to "Blend" water sources to further control costs	Uncertainty of final costs
Raw water is an asset for attracting new buisnesses	

Blended Use of the Flint River

PRO'S	CON'S
Helps control cost of water	

*** CURRENTLY NO DECISIONS HAVE BEEN MADE REGARDING THE FUTURE WATER SOURCE

Improvements for City of Flint Water System

Reduce Leakage

- **Finalize a Preventative Maintenance Plan**
  - (Planning started in January 2012, requires funding, … part of Operational Costs)
  - Will help identify repair area's

- **Reduce water theft**

- **Replace water meters**
  - We currently have an eighteen month plan to replace all meters with more efficient "*Smart Meters*"

- **Encourage routine household checks**
  - "Faulty" toilets are a significant reason for household water loss. and unexpected larger bills.

Other Leakage concerns

✓Transmission Loss

✓Fire Hydrants

✓Incorrect water bills

✓Non-Payment

City of Flint Water Fund

Proprietary Funds Revenues, Expenditures, and Changes in Net Assets
Fiscal Year Ended June 30

	2007	2008	2009	2010	2011	2012 Projected	2013 Budget
Current Assets	17,248,277	16,155,282	13,213,411	9,092,746	9,295,966		
Current Liabilities	7,053,131	7,039,015	6,796,178	8,287,409	11,736,286		
Capital Assets, net of accumulated depreciation	34,453,626	57,264,585	55,977,802	54,419,070	52,253,233		
Revenue Bonds, long-term portion	33,759,432	31,804,432	30,156,259	28,116,259	25,925,336		
Unrestricted Net Assets/(Deficit)	12,183,661	8,396,496	2,694,056	(5,795,973)	(12,443,265)	(13,237,665)	(12,733,233)

City of Flint Sewer Fund

Proprietary Funds Revenues, Expenditures, and Changes in Net Assets
Fiscal Year Ended June 30

	2007	2008	2009	2010	2011	2012 Projected	2013 Budget
Current Assets	45,805,754	45,515,711	39,299,954	22,199,959	16,496,427		
Current Liabilities	17,117,109	18,000,968	12,928,688	2,570,710	1,894,249		
Capital Assets, net of accumulated depreciation	76,913,051	73,794,673	74,719,675	70,200,627	65,736,675		
Revenue Bonds, long-term portion	-	-	-	-	-		
Unrestricted Net Assets/(Deficit)	34,215,792	28,085,991	21,329,011	9,327,738	(423,349)	(7,646,457)	(10,646,457)

Water and Sewer Combined

	2007	2008	2009	2010	2011	2012 Projected	2013 Budgeted
Current Assets	63,054,031	61,670,993	52,513,365	31,292,705	25,792,393		
Current Liabilities	24,170,240	25,039,983	19,724,866	10,858,119	13,630,535		

Response to Treasury regarding water rates, etc.

The cost of water and sewer in the City of Flint has become one of the most vexing issues facing the Emergency Financial Manager. When the Emergency Manager was appointed in December 2011 the water system had a $20 million deficit. In order to address this deficit the EM was forced to increase water and sewer rates by over a combined 120% in the past 18 months.

When the previous EFM left the City in 2004, the water system has a reserve of approximately $60 million. In the intervening years several things occurred: for three of five years (2007-2011) no rate increases were passed along to customers even though Detroit charged increases of over 10% per year; in the years when increases were passed along those amounts did not equal the actual cost of the system; the City chose to use the equity built up in the Water and Sewer funds until that was no longer available; a large lawsuit was settled; the City must pay for the $48 million MDEQ upgrades required at the Water Treatment Plant; and unbilled or unpaid water and sewer charges increased significantly.

In the past 18 months water and sewer rates have been increased to reflect the actual costs to operate the water and sewer system. Major leaks in the distribution system have been repaired. Unpaid water and sewer usage is now being addressed and the water affidavit process is part of this problem.

The City of Flint currently allows landlords to put the water and sewer billing in the name of the renter. This affidavit process holds the landlord harmless for any water costs. The deposit for the affidavit has been set at $100, which is the lowest in the County. The deposit fees in the County range from a low of $100 to a high of $500. The City is raising its rate to $350, which puts us about in the middle of the range. Depending on usage, this will cover 60 to 90 days' water charges and reduce the amount of uncollected billing. Keep in mind, any water not paid for is eventually charged to those who do pay through increased rates.

Because the deposit is so low in relation to the current charges, renters quickly owe more than the deposit, and find it easier to simply walk away from the rental and forfeit the deposit. This results in the City being on the hook for the unpaid bills. Currently there are 4,893 affidavits, and 4029 of them (82%) past due. This facctor alone totals to just under $3 million. In addition, when the renter walks away, the City has no way of knowing that the property is vacant. Many times the landlord rents the property again, without filing an affidavit, and the water continues to be charged to the former renter, again adding uncollected bills to the City. In the past the collection rate for past due accounts, when turned over to a collection agency, has been about 3% on average. Keep in mind that this is a deposit, not a fee, and can be refunded when the renter leaves the property. Also, the landlord can avoid the renter's deposit requirement by keeping the water and sewer billing in his name.

The City is also studying the potential to hold the landlord accountable for the water charges under certain conditions, such as failure to notify the City when a renter leaves and then renting the property again without filiing a new affidavit.

The City recognizes that the high cost of water is a factor which is causing low income residents to choose to leave the City and the increase in the deposit fee might accelerate that choice. However, many of the surrounding communities charge a higher deposit than does the City o Flint. Renters are leaving the City because they can get better housing for less money, live in safer neighborhoods with better schools, have their water charges decrease by about half, and have their insurance rates reduced by approximately 50%.

Water and sewer costs have resulted in about 8,000 current customers to be more than 60 days past due. Many are senior citizens who have lived in Flint their entire life, paid their taxes, etc. and now find themselves unable to pay their water bill. This concerns the City more than the issue of deposits. We have put in place for this year the ability for citizens to direct a part of their city tax refund to help people with their water bills, and we are reviewing other options as well as scheduled meetings with agencies involved in helping low income people with their bills.

We further recognize that we have staffing issues and water theft to address. The City is able to complete about 120 water shut-offs per week. At that rate we can not keep up with delinquent account shut-offs. The city also reconginzes that water theft through meter by-pass or unauthorized turn-on must be resolved.

Ultimately, the City must find a way to hold down future increases in the cost of water, to bring them more in line with the Genesee County water customers. To this end the City has recommended to Treasury, that the City leave the Detroit Water System and join KWA with Genesee County, Lapeer and Sanilac Counties and the City of Lapeer. We believe this is the most significant long term factor in stabilizing costs to the water customers in the City of Flint.

From: Dillon, Andy (Treasury)
Sent: Sunday, March 17, 2013 6:56 PM
Subject: Fwd: Flint Water Supply Alternatives
Attachments: TYJT Recommendaton DWSD vs Flint.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Governor and Dennis,

Attached is the recommendation from the engineers we hired to advise us on the KWA project for Genesee/Flint. As you will see, they are recommending that Flint stay with DWSD. This has ramifications that merit further discussion. Dennis and Brom, can you schedule a mtg for follow up?

Thanks,

Andy

Sent from my iPad

Begin forwarded message:

> **From:** David Guastella <DGuastel@tyjt.com>
> **Date:** March 17, 2013 1:07:03 PM EDT
> **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Cc:** George Karmo <GKarmo@tyjt.com>, Awni Qaqish <aqaqish@tyjt.com>, "Hichez, Amy (Treasury)" <HichezA@michigan.gov>
> **Subject: Flint Water Supply Alternatives**
>
> Good afternoon Treasurer Dillon,
>
> As requested in our meeting on Friday, March 15th, I am attaching TYJT's recommendation regarding Flint's alternatives for water supply. Please do not hesitate to contact us should you have any questions or wish us to look into anything further regarding this issue.
>
> Thank you,
>
> Dave

STATE OF MICHIGAN CONTRACT NO. 271N3200089

CITY OF FLINT WATER SUPPLY ASSESSMENT

At the request of the Treasurer, Tucker, Young, Jackson, Tull, Inc. (TYJT) makes the following recommendation to the Department of Treasury concerning Flint's water supply alternatives. Based on the financial analysis performed of the various options presented by DWSD to continue treated water service to Flint compared to Flint being supplied by the new KWA untreated water system, TYJT believes that several of the options presented by DWSD are lower in cost currently and over the long run than the one offered by KWA. TYJT also believes that DWSD's most recent offer (subsequent to the submittal of our report) to build a smaller parallel water main from Imlay to Flint, funded by the entire DWSD base of customers, is the best solution offering the least cost alternative and the required redundancy by MDEQ.

Furthermore, since a majority of the KWA system has not been designed and none of the system has been constructed, there is an additional risk that the cost of the KWA system may actually be higher than estimated due to potential construction delays and unforeseen conditions. This risk to Flint could be substantial since the city is responsible for 30 percent of the KWA design and construction costs while still having to purchase water from DWSD during the construction period.

Finally, there are other issues that were identified in our report that may result in risks to Flint if it were to join KWA that should be considered by the Treasury in determining how Flint's potable water should be supplied. These issues are related to redundancy and reliability, other items affecting cost, and Flint's desire to control its own destiny related to its water supply. These are described further below.

- DWSD's supply to Flint is via a 72-inch water main from Imlay City. This main also supplies Imlay City, Mayfield and the Greater Lapeer County Utilities Authority (GLCUA). The volume of water contained within the 72-inch main is approximately 30 million gallons. If Genesee and Flint move to KWA then the three remaining communities' consumption would most likely not be large enough to maintain fresh water in DWSD's pipeline (due to loss of chlorine residual). DWSD may consider shutting down the 72-inch line completely due to the water quality concerns, which would then create an additional burden for Imlay, Mayfield and GLCUA to finance treated water supplies.
- The KWA supply option is counter to the Treasury's Competitive Grant Assistance Program (Formerly EVIP Grant). This program has been put in place to allow for communities to consolidate their services and save money. Two existing customers of DWSD (Flint and Genesee County) along with the potential of others customers (GLCUA, Mayfield, Imlay City) separating from another water system is in contradiction to the program.
- There is a concern over the ability of smaller systems (KWA) over larger systems (DWSD) to pay for future unfunded mandates and regulations. Obviously, identifying regulation requirements over 30 years is hard to determine. However, it is widely accepted that a large system has greater ability to respond to unfunded mandates because the cost can be distributed over a large customer base.
- Although Flint will be responsible for 30 percent of the construction cost, they will only have a minority vote on the KWA board. Furthermore, there are other communities (Lapeer County, the City of Lapeer, and Sanilac County) that sit on the board and vote. However, they are not purchasing water nor contributing to the construction costs. Their position on the KWA Board will not provide them an ability to "control their own destiny," as they have stated to the Treasury.

From: Dillon, Andy (Treasury)
Sent: Tuesday, March 26, 2013 8:04 AM
Subject: Fwd: Flint Water

Sent from my iPad

Begin forwarded message:

> **From:** "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
> **Date:** March 26, 2013 7:57:47 AM EDT
> **To:** "Stibitz, Brom (Treasury)" <StibitzB@michigan.gov>, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Subject: Flint Water**
>
> Fyi... in case you missed it I heard about this on the news this a.m.
>
> Flint City Council approves resolution to buy water from Karegnondi, state approval still needed
> By Dominic Adams | dadams5@mlive.com
> on March 25, 2013 at 10:45 PM, updated March 26, 2013 at 1:28 AM
> FLINT, MI – Flint is one step closer to getting its water from Lake Huron as part of the Karegnondi Water Authority.
> The vote, approved 7-1 at the Flint City Council meeting Monday, March 25, may have set in motion the end to Flint paying to get its water from Detroit.
> Under the proposal, Flint would get 16 million gallons per day of raw water from Lake Huron, pipe it to Flint for treatment and then sell it to customers throughout the city. Another 2 million gallons per day would come from the Flint River and will be treated in Flint.
> Mayor Dayne Walling said the Department of Environmental Quality must approve Flint's getting 2 million gallons per day from the Flint River.
> Tuesday's meeting followed weeks of discussions and special meetings surrounding the resolution.
> "We got there," Councilman Joshua Freeman said. "That's the important thing."
> There were more than 50 people at Monday's meeting.
> "Going with Karegnondi is the best decision. We have no opinion on the economics of the decision," said Rebecca Fedewa, Flint River Watershed Coalition executive director. "If we start drawing water out of the Flint River, we are at risk of having to start releasing water from our reservoirs."
> Genesee County Drain Commissioner Jeff Wright said the decision must still be approved by a county water and waste advisory board. The KWA board will then be reconvened for final approval.
> Wright said construction could start in May.
> State treasury officials still must approve the city council's move because Flint has an emergency financial manager. All expenditures over $50,000 must be approved.
> Genesee County Drain Commissioner Jeff Wright has said that Flint would pay roughly $6.4 million annually for water service if it joined the pipeline – a nearly $4 million savings on what it pays Detroit for water.
> Walling previously said the city would save $19 million over eight years by getting water from

the KWA.
"It's a historic night in the City of Flint," Walling said. "The savings will be less with the capacity level approved by city council because there will be increased treatment cost for the river water."
He said the DEQ told the city it needed to get 18 million gallons per day or there would have to be additional work done at Flint's water plant.
Flint's water plant and the Flint River is currently the backup for Flint and Genesee County, however, the plant only operates four times per year.
Councilman Bryant Nolden was the lone dissenting vote.
"It was a protest vote," Nolden said. "I knew they had enough votes. I just feel like the Flint River is our best option."
Karengnondi is the regional water authority that includes Genesee, Lapeer and Sanilac counties and the cities of Flint and Lapeer.
Flint is the second municipality, behind Genesee County, to officially decide to purchase raw water through the KWA. Lapeer city officials said they intend to purchase water, but an agreement has been finalized.
Dominic Adams is a reporter for MLive-Flint Journal. Contact him at dadams5@mlive.com or 810-241-8803. Follow him on Twitter, Facebook or Google+.

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From: Dillon, Andy (Treasury)
Sent: Thursday, March 28, 2013 6:18 PM
Subject: KWA

Follow Up Flag: Follow up
Flag Status: Flagged

Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.

We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.

I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.

Regards,

Andy

Sent from my iPad

From: Muchmore, Dennis (GOV)
Sent: Tuesday, November 17, 2015 1:55 PM
To: Wurfel, Sara (GOV)
Attachments: Re: KWA; FW: KWA; Re: Flint; Flint Water Distribution Comm Plan

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 9:40 AM
Subject: Re: KWA

Wow, what happened? I thought we were going the other way.

On Mar 28, 2013, at 6:17 PM, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov> wrote:

> Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.
>
> We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.
>
> I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.
>
> Regards,
>
> Andy
>
>
> Sent from my iPad

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 1:31 PM
Subject: FW: KWA

Both Dan and Andy believe that the discussions held in the past with DWSD and Flint have been contentious and not fruitful. What we are going to do is tell Flint that if they believe it is in Flint's interest they should sign and submit to Andy for his approval. Brom will tell them that. At the same time we will inform DWSD that this is happening and if they want to make a last attempt they should do so during the period of time that Andy is deliberating on his counter signature. Dan does not believe that DWSD has been straight and doesn't think they will offer anything and Andy concurs. Under any circumstances Flint will have to deal with DWSD on the present delivery system and that may create some negotiations but it's doubtful they will be significant.

We will encourage DWSD to make an attempt. We did call them together as recently as November to negotiate and those discussions were not successful. Andy and Dan will make one last effort.

-----Original Message-----
From: Dillon, Andy (Treasury)
Sent: Thursday, March 28, 2013 6:18 PM
To: Snyder, Rick (GOV); Muchmore, Dennis (GOV); Roberts, John (GOV); Wyant, Dan (DEQ)
Cc: Stibitz, Brom (Treasury); Fraser, Roger (Treasury); Saxton, Thomas (Treasury)
Subject: KWA

Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.

We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.

I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.

Regards,

Andy

Sent from my iPad

From: Dillon, Andy (Treasury)
Sent: Friday, March 29, 2013 6:45 PM
Subject: Re: Flint

We grilled them on that quite a bit. There is a maximum guaranteed price on key construction items and the path allegedly presents limited risk- rural, thru areas w no gas or water lines, existing easements etc. I was the skeptic but view of my staff and deq was universal in favor of kwa. I was won over as well. I can't make a legitimate case that financially this is worse for Flint unless today's threat from Shank (DWSD will bill Flint for past capex) is real. We are sorting thru that.

I see lots of political downside as well. Community is invested in this.

Sent from my iPhone

On Mar 29, 2013, at 3:10 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

> How does Kurtz propose to protect them from cost overruns? Did they get a low ball price and how do we keep it from ballooning? Finally, what does that do to the sale value of DWSD?
>
> Sent from my iPhone

From: Buhs, Caleb (GOV)
Sent: Thursday, April 11, 2013 7:13 AM
Subject: Flint Water Distribution Comm Plan
Attachments: Flint Water Distribution Comm Plan.docx

Attached is the comm plan for the announcement of the Treasurer's determination on the Flint water plan today. Terry will be handling at Treasury, contacting media and fielding follow-up questions. Given that this was the Treasurer's determination to make, we will send all inquiries to Terry. If we receive any questions specific to the Governor I will handle in the afternoon when I get back from Grand Rapids.

Caleb

Flint Water Distribution Comm Plan and Talking Points

4/11/13

Flint Emergency Manager Ed Kurtz submitted a resolution to Treasurer Dillon on Friday, March 29th, seeking approval for Flint to join the Karegnondi Water Authority (KWA) to secure potable water for the City of Flint. The move to join KWA would remove Flint as a customer of Detroit Water and Sewer Department (DWSD). Treasurer Dillon was required to approve the resolution by EM Ed Kurtz per PA 436, because it was an expenditure over $50,000

Communication Plan

Thursday, April 11, 2013

- **9:00 a.m.** Send official notification of approval to EM Ed Kurtz (Brom Stibitz/Amy Hichez)
- **10:00 a.m.** Call Flint Mayor and Council President (Andy Dillon)
- **10:30 a.m.** Call DWSD to notify of decision (Andy Dillon/Brom Stibitz)
- **10:30 a.m.** Contact Flint media (Terry Stanton/Caleb Buhs)
    - Ron Fonger, MLive; WNEM; WJRT; WEYI

Topline Messages

- This is a decision made by the City of Flint and is a local decision that affects their local water supply.
- After thorough review and analysis, Treasurer Dillon approved the resolution for Flint to join the KWA.
- Flint Emergency Manager Ed Kurtz has worked closely the city's elected officials throughout the decision-making process and all agree that this is best for the citizens and businesses in Flint.
- This is a good example of an EM and city officials collaborating to determine the best course of action for the city's future.
- The Departments of Treasury and Environmental Quality have approved the financial and environmental soundness of KWA's plan.
- Flint accounts for only 2% of DWSD's capacity.
- With continued efficiency improvements and ongoing administrative restructuring, DWSD will be suited to handle the loss of customers.

Background

- This move will allow Flint to control future water rates for Flint residents.
- This will save Flint at least $100 million over the next 25 years, and possibly as much as $300 million.

DRAFT

- Genesee County planned to build pipeline whether Flint was part of the project or not. The removal of the county from DWSD accounts for 4% of their capacity.
- Collaboration between the City of Flint and Genesee County could signify the start of a better relationship and could lead to future collaborative endeavors.

DRAFT

From: Stanton, Terry A. (Treasury)
Sent: Thursday, November 19, 2015 2:38 PM
To: Wurfel, Sara (GOV); Murray, David (GOV); Sampson, Jeremy (TREASURY)
Cc: Heaton, Anna (GOV); Kennedy, Jordan (GOV)
Subject: FW: Flint water
Attachments: 271Q3209 Flint Water Supply Assessment Final Report 2-6-13.pdf

Importance: High

All—

Please see below from Egan. This is essentially the same "?" Nancy Kaffer asked of Jeremy a couple weeks back. Intend to say something along the lines of the following...please advise.

The Tucker-Young report offered an initial perspective on the situation, but as additional information was received and considered by the city, city officials determined that KWA offered the best long-term solution for Flint. As has been noted previously, all involved, the mayor and city council, believed the move to KWA was appropriate and supported the move.

As we have discussed previously, consideration of the development of a Flint-area/Genesee County water system had been on-going since the early 2000's and the City of Flint had been in discussions about joining a new system for much of that time.

From: Egan, Paul [mailto:pegan@freepress.com]
Sent: Thursday, November 19, 2015 1:09 PM
To: Stanton, Terry A. (Treasury) <StantonT@michigan.gov>
Subject: Flint water

Terry attached is the City of Flint Water Supply Assessment, a February 2013 study commissioned by the state treasurer and carried out by Tucker, Young, Jackson, Tull Inc.
Why did the state and city opt to split with DWSD and go with KWA when this study found it would be more costly to do so?

(From p. 17) "Based on the analysis, it is prudent to assume the KWA water supply option costs would be somewhere between the KWA-1 and KWA-2 options. Therefore, the analysis indicates that the two DWSD options of supplying 8 MGD on a maximum day and up to 8 MGD on average are the least cost options for Flint. These options allow Flint to maximize the use of existing assets; the City of Flint's (the Flint WTP) and DWSD's (the existing 72-inch main)."

Thanks, Paul Egan
Detroit Free Press
517-372-8660

STATE OF MICHIGAN CONTRACT NO. 271N3200089

CITY OF FLINT WATER SUPPLY ASSESSMENT

February 2013

For Submittal to:

State of Michigan, Department of Treasury

Submitted by:

TUCKER, YOUNG, JACKSON, TULL INC.

CONSULTING ENGINEERS-PLANNERS
615 Griswold Suite 600
Detroit, Michigan 48226
(313)963-0612 FAX (313)963-2156

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1. INTRODUCTION

Tucker, Young, Jackson, Tull, Inc. (TYJT), at the request of the State Treasurer performed an analysis of the water supply options being considered by the City of Flint. The City of Flint is presently supplied potable water from the Detroit Water and Sewerage Department (DWSD). This supply is from a single 72-inch water main that terminates at a master meter located at Potter and Baxter. Additionally, downstream of the DWSD master meter, Flint supplies its customer Genesee County. The City of Flint also operates a water treatment plant that uses the Flint River as its source of supply to provide back up and redundancy to the DWSD supply as required by MDEQ

The Karegnondi Water Authority (KWA) is planning on constructing a raw water supply system that could provide Lake Huron water to the Flint Water Treatment Plant. Flint's existing plant would be upgraded to treat the new raw water source.

The State Treasurer has appointed an emergency financial manager for the City of Flint. As such the Treasurer has requested TYJT to provide an analysis of the water supply options to assist the Treasurer in determining any potential risk and the best course going forward for supplying potable water to the City of Flint.

Report Organization

The following sections of this report are described below:

Section 2 – The basis of the analysis is described in this section. The options include the KWA option and several options offered by DWSD.

Section 3 – A significant amount of information and data was collected including memorandums, reports, drawings, financial reports, and other documents. This section summarizes the information used in the analysis.

Section 4 – This section describes the evaluation of the cost of supply for the Flint options. The costs are comprised of the initial cost of operations plus the annual rate of escalation/inflation.

Section 5 – The evaluation process used to analyze the construction costs associated with the KWA supply system is described in this section. Additionally, the cost of financing the capital requirements is described.

Section 6 – This section presents the financial review of the options considered to supply potable water to Flint. A summary of these options is also provided.

Section 7 – In addition to the financial analysis other considerations were identified that should be considered in understanding the risks and determining the best option to supply Flint. They include items related to cost, redundancy and reliability, and Flint's ability to control their future cost of water supply.

2. FLINT WATER SUPPLY OPTIONS

Two water purveyor options were evaluated; the KWA water supply system and continued supply from DWSD. Both suppliers would provide water from Lake Huron as the source. The KWA system is a raw water supply, which means that the water would have to be treated by Flint before distributing the potable water to its customers. The DWSD supply is potable or "finished" water and would not need additional treatment.

Additionally, an option for the Flint WTP to supply the City of Flint without being supplied from either DWSD or KWA was initially considered. The preliminary investigation evaluated the cost associated with the required improvements to the plant and to the Flint River dam system. Although it appeared that this was a viable option, Flint in a meeting on December 20, 2012 with the Treasury, stated that the City did not want to pursue the option and it is no longer being considered.

Karegnondi Water Authority (KWA) Lake Huron Water Supply

The KWA water supply system schematic is shown in Figure 2-1. The system is comprised of an intake in Lake Huron that supplies water to the Lake Huron Pump Station (LHPS). The LHPS lifts the water and pumps it through an approximately 22 mile long 60-inch pipeline. The pipeline terminates at a 5 MG reservoir and is then pumped from the Intermediate Pump Station (IPS) through approximately 26 miles of 60-inch and 18 miles of 30-inch pipeline to the existing Flint WTP. Downstream of the IPS, approximately half way to the Flint WTP, the 60-inch line would also supply a new Genesee County WTP.

The raw water transmission system has a 60 MGD capacity and is sized to deliver a maximum of 18 MGD to the Flint WTP with an average day supply of 12 MGD. Improvements at the Flint WTP would also be required to treat the lake water as the plant is currently designed to treat the Flint River water.

The term of the KWA contract for Flint is 40 years.

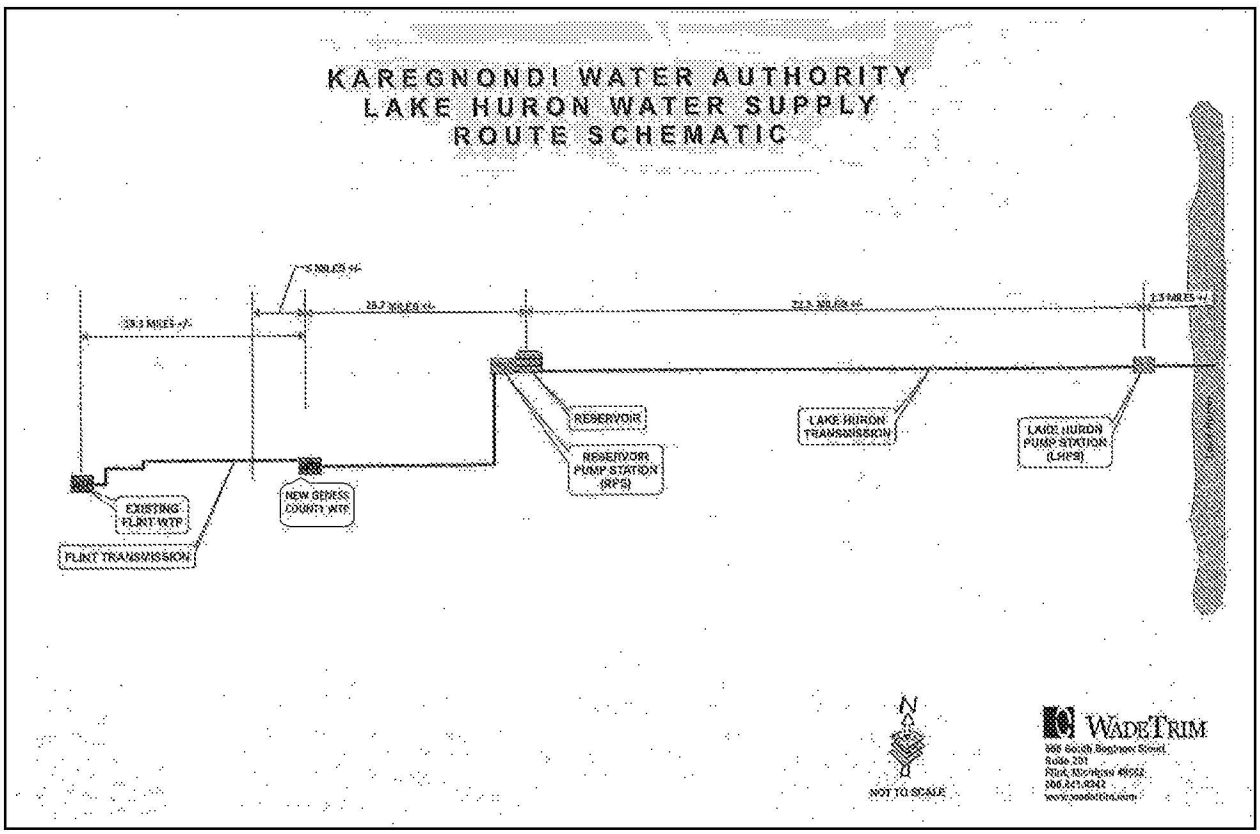

Figure 2-1: KWA Raw Water System

DWSD Water System

The DWSD system schematic is shown in Figure 2-2. Flint is currently supplied by DWSD at Master Meter FL-1, located at Potter and Baxter. Flint typically gets its water from the Lake Huron WTP, located in Fort Gratiot, Michigan; near the Lake Huron shoreline. Water is treated and pumped at the Lake Huron WTP and supplied through a 120-inch pipeline to an intermediate pump station called the Imlay Pump Station. The Imlay Pump Station has 20 MG of reservoir capacity. Depending on the time of year and the DWSD system demand, water is either bypassed directly to Flint or it is re-pumped at Imlay. It should be noted that the DWSD supply to Flint is part of a very large water system and during emergencies or outages water can be supplied from the south up to Flint in lieu of the Lake Huron facility.

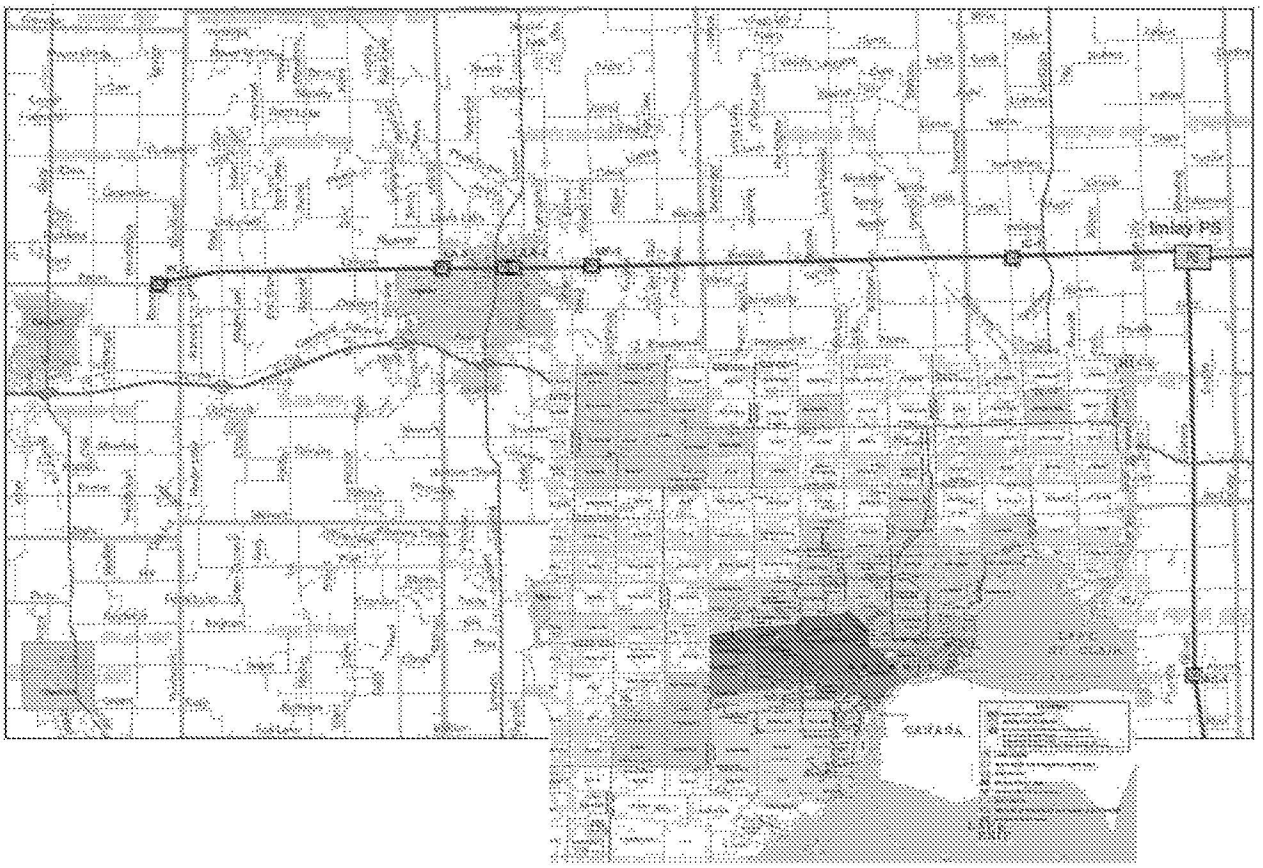

Figure 2-2: DWSD Water System

The pipeline from Imlay to FL-1 is a 72-inch pipeline. It has been estimated that the 72-inch line serving Flint has a capacity in excess of 90 MGD.

DWSD has presented several contractual options to Flint and all of them are based on Flint signing a new 30 year contract. The options shown in Table 2-1 are based on two different supply points; one at the current master meter location FL-1 at Potter and Baxter (P&B) and the other at the location of the Imlay Pump Station. The reason for the varying options is to provide a lower water rate at the Imlay Station, since the DWSD rate formula is based on distance and elevation factors related to the supply location.

The rates are also dependent on the maximum amount of water DWSD supplies. As example, if DWSD supplies a maximum day demand of 18 MGD that would equal the entire amount of water required by Flint.

For the options less than the maximum of 18 MGD means that the Flint WTP would supplement the difference by supplying water treated from the Flint River. These options are known as "blending" and would allow for Flint to blend two sources of water to supply its customers; the Flint River using the Flint WTP and Lake Huron from DWSD system.

Description	Average Day Demand
18 MGD Maximum Day Customer – FL-1	12 MGD
12 MGD Maximum Day Customer – FL-1	8 MGD
8 MGD Maximum Day Customer – FL-1	8 MGD
12 MGD Maximum Day Customer - Imlay	12 MGD
8 MGD Maximum Day Customer - Imlay	12 MGD

Table 2-1: DWSD Supply Options

3. DATA COLLECTION

During the course of the investigation several documents were used to perform the analysis. The names of the documents are listed below for reference.

KWA and Flint

- Preliminary Engineering Report, Lake Huron Water Supply Karegnondi Water Authority, September 2009;
- Analysis of the Flint River as a Permanent Water Supply for the City of Flint, July 2011;
- Cost Comparison, KWA vs. DWSD, Letter to Mr. Kurtz, October 31, 2012;
- Lake Huron Supply Study, KWA, Appendix 20, October 2012 Preliminary Report Update, Final Report (DRAFT), October 4, 2012;
- Articles of Incorporation of Karegnondi Water Authority, endorsed in 2010;
- Karegnondi Water Authority Bylaws, October 26, 2010;
- KWA Raw Water Supply Contract;
- Flint WTP Statement of Revenues and Expenditures 09' – 12';
- GCDC Division of Water and Waste Services Financial Statements 03' – 11'; and
- Assorted emails with further clarification of questions and documentation.

DWSD

- Historical Rates and Charges to Flint 04' – 13';
- Historical Rates and Charges to Flint with Hypothetical Model Contract 10' – 13';
- 2013 Rates and Charges for the following options:
  - 18 MGD Maximum Day Customer at FL-1;
  - 12 MGD Maximum Day Customer at FL-1 (Flint blending*);
  - 8 MGD Maximum Day Customer at FL-1 (Flint blending*);
  - 12 MGD Maximum Day Customer at Imlay (Flint blending*);
  - 8 MGD Maximum Day Customer at Imlay (Flint blending*); and
- Assorted emails with further clarification of questions and documentation.

* Flint blending based on DWSD supplying two-thirds and Flint one-third of 12 MGD average day demand.

Two meetings were also held; one with DWSD and one with Flint and Genesee County representing KWA. The meetings were held on November 19, 2012 and November 20, 2012, respectively. Minutes from these meetings are included in Appendix A.

4. COST OF SERVICE

Information provided by DWSD, Flint, and representatives of the KWA were used in the cost of service evaluation. To evaluate the annual escalation/inflation rate over the planning period, the rate adjustment for DWSD was estimated based on the recent rate adjustment history. For the KWA system both the estimated cost of operations when the system begins supplying water and the annual rate adjustment or inflation was evaluated. The existing cost of operations and escalation for the Flint WTP was based on actual costs provided and then adjusted depending on the scenario considered. This section describes the evaluation process and the rates used in the analysis.

DWSD Water Supply

The City of Flint has been a customer of DWSD since 1967. The Flint WTP has been maintained as a backup to the DWSD system. As indicated previously, several options were provided by DWSD depending on the type of service Flint was to select. The unit cost of water for each of these options is shown in Table 4-1. These rates are based on DWSD's FY13, which are current until July 2013.

Description	Average Day Demand (MGD)	Unit Rate ($/MG)
18 MGD Maximum Day Customer – FL-1	12	16.37
12 MGD Maximum Day Customer – FL-1	8	16.31
8 MGD Maximum Day Customer – FL-1	8	12.68
12 MGD Maximum Day Customer - Imlay	12	14.38
8 MGD Maximum Day Customer - Imlay	12	11.11

Table 4-1: Cost of DWSD Supply Options

To determine annual escalation rate, DWSD's last 10 years of history was used along with other large urban water systems in Michigan. The water systems used for benchmarking comparison were: Lansing, Grand Rapids, and Saginaw.

Table 4-2 identifies the annual and average rate of increase to Flint based on supplying water either to the current FL-1 at Potter and Baxter or Imlay. Note the last three years of the rates (FY 2011 through FY 2013) assumes that Flint's cost would be based on the new 30 year contract; FY 2011 being the first year that the new contract was available.

Fiscal Year	Average Unit Cost ($/Mcf)	Annual Change (%)
2004	11.06	
2005	10.24	-7.4
2006	10.56	3.1
2007	11.09	5.0
2008	11.35	2.3
2009	13.07	15.2
2010	11.73	-10.3
2011	13.89	18.4
2012	15.08	8.6
2013	16.24	7.7
Average		4.6%

From FL-1

Fiscal Year	Average Unit Cost ($/Mcf)	Annual Change (%)
2004	11.06	
2005	10.24	-7.4
2006	10.56	3.1
2007	11.09	5.0
2008	11.35	2.3
2009	13.07	15.2
2010	11.16	-14.6
2011	12.23	9.6
2012	13.28	8.6
2013	14.32	7.8
Average		2.9%

From Imlay

Table 4-2: Recent DWSD Water Rates

Audited financial reports were used to determine the rate of inflation associated with other three large municipal systems. The results are shown in Table 4-3.

Water Systems	Years Evaluated	Average Rate (%)
Lansing	05'-12'	4.6
Grand Rapids	04'-11'	1.6
Saginaw	04'-11'	7.0

Table 4-3: O&M Inflation Rates of Other Large Water Systems

Based on the information analyzed from DWSD and the other communities, it was determined that a fair annual rate of inflation for operations and maintenance cost for the analysis should be 4.4%. The 4.4% has historical significance from Flint's current water supplier and falls within the range of the other communities.

KWA Water Supply

The initial projected O&M cost for the KWA supply would be comprised of KWA's O&M costs as well as Flint's O&M costs. Because there was limited information provided, the initial estimated rate of $1.50/MCF was used. This rate is based on information from the cost comparison analysis attached to the letter to Mr. Kurtz, dated October 31, 2012.

The KWA cost evaluation used an annual O&M inflation rate of 5%. To validate this rate a similar analysis to DWSD's operations and maintenance annual rate of inflation was used. First, in discussions with Flint and the Genesee County Drain Commission (GCDC), they believed that the annual rate of inflation for the new KWA system would be similar to the GCDC Water & Waste Services (WWS). Additionally, two large transmission systems were used to benchmark the inflation rates: the Southeastern Oakland County Water Authority (SOCWA) and the Ypsilanti Utility Community Authority (YUCA). Although both of these systems transmit finished water opposed to raw water, they were considered similar enough for comparison as they are comprised of only large water mains, pumping facilities and storage.

Once again audited financial statements were used to calculate the inflation rates. A summary of the findings are shown in Table 4-4. Based on the fact that the information analyzed showed a large difference between the two systems, it was determined that the KWA assumption of 5% was a good rate of inflation to use in the financial analysis. This rate is almost equally between the GCDC rate and the other two transmission systems.

Systems	Years Evaluated	Average Rate (%)
GCDC WWS	03' – 11'	10.5
SOCWA	04'-12'	--
YUCA	04'-12'	0.7

Table 4-4: O&M Inflation Rates of Other Comparable Systems to KWA

Flint WTP

The Flint WTP currently serves as a backup supply to the DWSD service to Flint. To maintain backup operations, the City of Flint operates the plant approximately 20 days each year. Flint indicated that the average production rate when they operate is 11 MGD.

For the blending options and the KWA supply considered, Flint would be required to operate its plant all year around. Therefore, their operating and maintenance costs were evaluated and adjusted to determine an annual cost associated with year-round operations.

The Flint WTP provided three years of operating costs for the assessment. Additionally, reports listed in Section 3 were also used as reference to determine both operating costs for the plant processing Flint River water (blending options) and Lake Huron raw water (KWA option).

Major cost centers were analyzed to estimate annual operation and maintenance. They included: labor, utilities, chemicals and residual management. In general, as recommended by the Flint plant staff, labor and overhead were increased from the current costs by two-thirds. Additionally, variable costs for power, chemicals and residual cost were increased to estimate full time treatment at the Flint WTP. Data from the KWA Preliminary Report and annual operating data for the Flint WTP (provided separately) were analyzed to make these forecasts.

The annual operating and maintenance costs developed for Flint WTP used are shown in Table 4-5.

Sources of Supply	Average Daily Production (MGD)	Estimated Annual O&M Cost
Flint River (Blending with DWSD)	4	$5,895,097
Lake Huron (Supplied by KWA)	12	$7,913,118

Table 4-5: FY 13 O&M Costs for Year-round Operations

It was determined that a fair annual rate of inflation for operations and maintenance cost for the Flint WTP plant should be 4.51%. The 4.51% is an average of Lansing, Grand Rapids and Saginaw facilities.

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5. CAPITAL REQUIREMENTS

Large capital investments would be required by Flint and GCDC to construct the KWA supply system. Furthermore, some of the options presented by DWSD (supply point from Imlay) would require the purchase by Flint of DWSD's 72-inch water main. Performing the financial analysis; therefore, required an analysis of the KWA construction cost estimate for the transmission system and Flint WTP improvements.

Revenue bonds were also identified as the source of financing the new supply system and associated improvements. This section describes the assumptions made and the interest used for financing the improvements.

KWA Supply System

The most current cost estimate of the KWA system was presented in the document titled; Lake Huron Supply Study, KWA, Appendix 20, October 2012 Preliminary Report Update, Final Report (DRAFT), October 4, 2012. The cost of construction is estimated at $272,421,558. Flint's portion would be 30% or $81,726,467.

Due to the significance of this expenditure, a detailed review of the cost was performed and is presented in this section. The analysis was performed based on the main elements of the supply system: the lake intake, the two pumping stations, and the transmission pipeline. Additionally, an analysis was performed related to construction contingencies and other costs such as engineering, legal, and administration.

Lake Intake

KWA representatives indicated in a meeting in November that the design documents for the intake were at 90% and that it was planned for advertisement in January 2013. A summary of the estimate is shown in Table 5-1.

Description	Estimate
Intake and Crib	$22,076,850
ELAC at 25%	5,519,213
Property	2,300,000
Total	**$29,896,063**

Table 5-1: KWA Intake Cost Estimate

Based on the evaluation, it appeared that the cost estimate was reasonable. Given that the design was nearly complete, the engineering, legal, administration, and construction contingencies (ELAC) at 25% were also found to be appropriate.

Pumping Stations

KWA representatives indicated that the pump stations were estimated at a level of design less than 15%. Therefore, in addition to an evaluation of their cost estimate, other water pumping station costs were used for comparison. Additionally, contractors were also contacted for costs. Table 5-2 summarizes the KWA cost estimate compared to our cost estimate performed for the Treasury.

Description	KWA	Estimate	TVT	Estimate
Pumping Stations		$24,618,080		$54,573,314
Land for Intermediate Pump Station and Reservoir		--		75,000
Subtotal		$24,618,080		$54,648,314
ELAC for Construction	25%	6,154,520	30%	16,394,494
Total		**$30,772,600**		**$71,042,808**

Table 5-2: Pumping Stations Cost Estimate

Two things to note regarding the difference in the cost estimates; firstly, there is a large difference in the cost estimates of the pumping stations. The estimate developed for the Treasury used several other pumping stations construction costs from Southeastern Michigan and discussions with contractors. These costs were then computed on a $/MG's for comparison.

Secondly, our estimate for the Treasury is based on an ELAC of 30% instead of KWA's 25%. Although 25% was acceptable for the intake, it is believed to be too low for the pumping station estimate given that the engineering effort is less than 15%.

Transmission Main

Although the specific route for the transmission main was not provided, an estimate was calculated based on the general information provided. Once again, the KWA estimate was based on a level of design less than 15%. The estimate performed for the Treasury used the line items provided by KWA for the pipeline and also consulted with contractors to evaluate the cost of construction. The comparison is shown in Table 5-3.

Although the cost of construction of the pipeline is similar, a value of 30% was used for ELAC due to the level of design. Additionally, KWA did not believe there would be any additional costs for easements; however, this did not seem practical. Therefore an estimate for acquiring the easements was added to the Treasury estimate and is based on the 277 easements identified by KWA. The cost shown includes surveying, legal, engineering, administration, etc.

Description	KWA	Estimate	TYJT	Estimate
Transmission Mains		$166,202,316		$167,419,530
ELAC for Construction	25%	41,550,579	30%	50,225,859
Subtotal		$207,752,895		$217,645,389
Easements		--		1,166,170
Total		**$207,752,895**		**$218,811,559**

Table 5-3: Transmission Pipeline Cost Estimate

Other KWA Costs

In prior estimates of the construction cost, KWA used an ELAC of 37%. In this case it could be considered that the engineering effort associated with the design would have been included. However, it is believed that KWA's reduced ELAC of 25%, does not include the design effort. Additionally, it would be prudent to assume that the owner would want a construction manager during construction of this large project. A summary of these costs are shown in Table 5-4.

Description	Estimate
Design Engineering for Pumping Stations and the Transmission Pipeline	$16,939,581
Construction Management at 5%of Project Cost Estimate of $217,645,389	14,434,609
Administration	349,440
Legal, Easements, Contract Documents	831,000
Total	**$32,554,630**

Table 5-4: Other Costs

Summary Comparison

A summary of the two cost estimates are shown in Table 5-5. Based on the comparison, the estimate performed by TYJT shows a higher cost to Flint by approximately $25,000,000.

Note that there are two other costs shown in the summary that were not previously addressed; power and backup power. Regarding the cost of providing power to the pumping facilities, the cost of $4,000,000 appears reasonable.

The KWA has repeatedly indicated that backup power is not needed. Backup power is a standard practice in the water industry. Furthermore, a loss of power at either pumping facility will prevent the supply of water to both Flint and Genesee County. For these reasons, the cost of providing backup power was included in our estimate for the Treasury.

Description	KWA Estimate	TVT Estimate
Intake/Crib	$ 27,596,063	$ 27,596,063
Pump Stations	30,772,600	71,042,808
Transmission Mains	207,752,895	217,645,389
Power	4,000,000	4,000,000
Redundant Power for PS		1,273,200
Land for Lake Huron Pumping Station	2,300,000	2,300,000
Design Engineering/PS and Transmission		16,939,581
Construction Management		14,434,410
Administration		349,440
Legal/Easement/Contract Documents		831,000
Easements		1,166,170
Total	**$ 272,421,558**	**$ 357,578,060**
Flint Share at 30%	**$81,726,467**	**$107,273,418**

Table 5-5: Total Cost Comparison

Flint WTP Improvements

The KWA analysis identified capital costs required to convert the existing WTP from river water treatment to treating lake water. The cost estimate was identified as $7,100,000 in the 2009 report. This number was used in the our analysis, since additional information was not provided. For the purpose of the financial analysis; however, the $7,100,000 was increased by 3% each year for three years to account for inflation.

DWSD Imlay Station Supply Options

The options identified by DWSD to supply service to Flint at the Imlay Pump Station would require Flint to purchase the 72-inch water main from Imlay to Master Meter, FL-1. The pipeline is approximately 25 miles long. The estimated cost provided by DWSD for estimating purposes is $4,700,000.

Financing

The cost of financing the revenue bonds for the capital work was investigated. Based on conversations with local financial advisors knowledgeable in bond financing, an interest rate of 5% for the 25 year

period was considered acceptable. This is based on a Standard and Poor's bond rating of A without insurance.

Additional costs associated with the bond include the reserve and bond issuance fee. The bond holders will require a reserve of approximately 10% of the loan to be held for the 25 year payment period. The cost associated with the bond issuance has been estimated at 2.25% of the principal borrowed for the KWA project and 3% for the smaller loan associated with the Flint WTP improvements or the purchase of the 72-inch main.

Furthermore, since no revenue will be generated to pay on the bonds for the first three years that the system is being constructed, the cost associated with capitalizing the interest was also included.

Finally, interest on the reserve will be provided back to KWA and Flint. Although the interest is currently less than 1%, it was determined that a 3% rate would be more prudent long-term.

6. FINDINGS

Using the information described in the previous sections, a cost evaluation was conducted for the KWA supply and the DWSD options. Individual worksheets for each option are provided in Appendix B. For the purpose of comparison a 30 year period was used. This period includes the 3 year construction period, the 25 loan period and an additional two years to get a sense of the cost of operation after the loans have been paid.

There were three separate cost sheets prepared for the KWA option. The first cost sheet (KWA) is based on the cost estimate provided by KWA. The costs provided assumed no overruns or delay in construction. With KWA's own assumptions of an overrun in construction of 15% and a one year delay in operations, the KWA estimated cost becomes $686,375,920 through Year 2042.

Since this cost estimate did not appear to include the financing of revenue bonds, another cost sheet (KWA-1) was developed that included KWA's cost estimate without overruns with the additional finance costs associated with the revenue bonds. A final cost sheet (KWA-2) includes the cost associated with the revenue bonds based on the estimate provided by TYJT for the Treasury.

A summary of the cost sheets provided in Appendix B are shown in Table 6-1. Figure 6-1 shows the cumulative annual costs associated with each option.

Option	Costs through 2042 ($)	Ranking by Cost
DWSD 8 MGD Maximum Day at Imlay Station	634,795,488	1
KWA *(10/31/12 No Overruns, As Provided)**	649,775,166	2
DWSD 8 MGD Maximum Day at FL-1	672,671,705	3
KWA-1 *(10/31/12 No Overruns with Cost of Financing)*	707,279,715	4
DWSD 12 MGD Maximum Day at Imlay Station	725,576,803	5
DWSD 12 MGD Maximum Day at FL-1	762,110,308	6
KWA-2 *(Treasury Estimate)*	766,784,313	7
DWSD 18 MGD Maximum Day at FL-1	821,226,268	8

* $686,375,920 with 15% overrun in construction and a one year delay in operations

Table 6-1: Total Cost of Options through 2042

Based on the analysis, it is prudent to assume the KWA water supply option costs would be somewhere between the KWA-1 and KWA-2 options. Therefore, the analysis indicates that the two DWSD options of supplying 8 MGD on a maximum day and up to 8 MGD on average are the least cost options for Flint. These options allow Flint to maximize the use of existing assets; the City of Flint's (the Flint WTP) and DWSD's (the existing 72-inch main).

Additionally, in recent conversations with the Treasury another option was discussed that could potentially be the most cost-effective solution. Currently the Flint WTP serves as a backup if service is

lost through either the DWSD or KWA pipeline. If the a twin pipe paralleling the DWSD 72-inch water main were constructed with interconnects with the 72-inch line, then the new water main could serve as the backup to Flint and the Flint WTP could be abandoned or potentially sold to Genesee County for their use.

The construction of the parallel pipeline would be considered in the DWSD capital expenditure as a Common to All (CTA) cost. This means that the capital cost of the pipeline would be shared by all DWSD customers and not just by Flint. Preliminary analysis of this option appears to be the most cost-effective of all the options discussed. However, a more thorough cost analysis is warranted and this approach would require an agreement between Flint and DWSD.

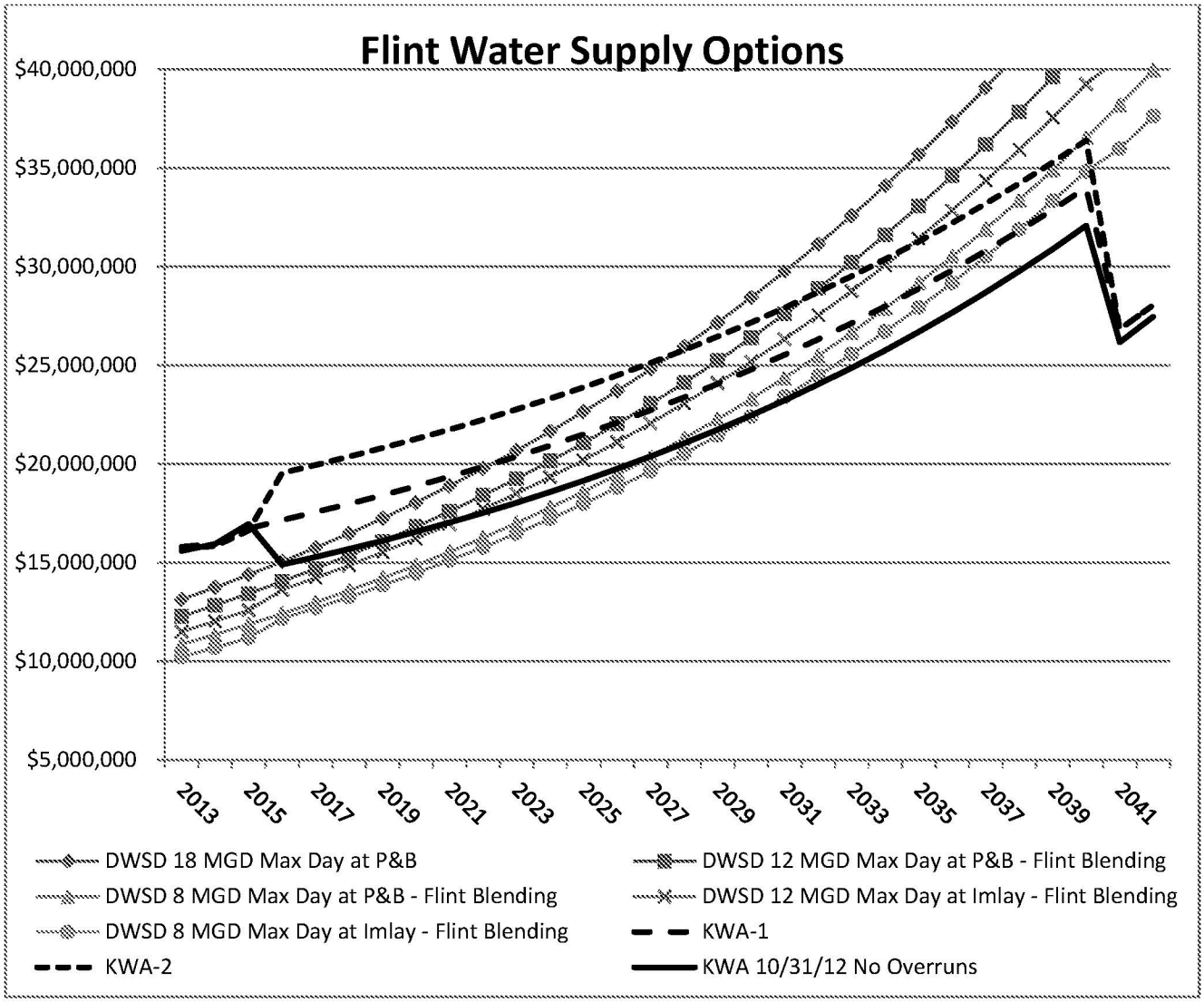

Figure 6-1: Flint Water Supply Options through 2042

7. OTHER CONSIDERATIONS

As part of the investigation other issues were identified that may result in risks to Flint that should be considered by the Treasury in determining how Flint's potable water should be supplied. These issues are related to redundancy and reliability, other items affecting cost, and Flint's desire to control its own destiny related to its water supply. These are described further below.

Redundancy/Reliability

In one of the first meetings related to this task assessment, which was held on November 1, 2012, the Genesee County Drain Commissioner, Mr. Jeff Wright, stated that one of the main reasons for pursuing the KWA supply option related to the lack of reliability of the DWSD system. He pointed to the Northeast blackout of 2003; a widespread power outage that occurred throughout parts of the Northeastern and Midwestern United States and Ontario, Canada, on Thursday, August 14, 2003. He stated that Flint and Genesee County were out of water for several days.

It is worth noting that this was a power outage of historic proportions that affected millions of Americans. However, DWSD did begin supplying water again relatively quickly in comparison to other major cities impacted by the same power outage.

Furthermore, the KWA supply system offers less redundancy to Flint than the current DWSD system. Under both options, Flint is supplied by a single pipeline; however, DWSD has backup power at all of its major facilities supplying Flint. The KWA system will not have a redundant power at its pumping facilities. This would be a major risk.

Currently, backup to the DWSD system for Flint is Flint's WTP using the Flint River as the source of supply. KWA has stated that the Flint River source would also be used as backup to Flint if the KWA supply through its pipeline was lost. However, since the Flint WTP would be upgraded to treat Lake Huron water under the KWA option, using the Flint River as a backup source would require the Flint WTP to maintain two process treatment streams.

In addition to Flint and Genesee County, the DWSD's 72-inch main supplies Imlay City, Mayfield and the Greater Lapeer County Utilities Authority (GLCUA). The volume of water contained within the 72-inch main is approximately 30 MG. Only supplying these three remaining communities would cause the water age to increase dramatically; somewhere in excess of three weeks old, before reaching the customers' master meters. Since the half-life of chlorine in the DWSD system is approximately 5 days, the chlorine would most probably be near zero requiring re-chlorination of the finished water upstream of the master meters.

Re-chlorinating is a costly and risky process due to the instability of chlorine gas. It is unknown whether DWSD would pursue this improvement or possibly abandoned the 72-inch pipeline.

If Flint is supplied by the KWA system, then DWSD supplying their other customers along the 72-inch water main may be reconsidered. Since the KWA system is a raw water supply, the communities would

either have to build a treatment facility to treat the water from KWA or find another water source for their communities.

Additional Cost and Risk Considerations

The design of the KWA supply and the construction of the system have not been completed; therefore, final costs and time to complete are unknown. Cost overruns and delays in completion will both negatively impact Flint's final cost. As example, if the project is not completed within the three year period, payment on the bonds will be due, but the revenue source needed from the sale of water could not be provided.

Furthermore, there is always a risk with large water system construction; especially those including an intake in the Great Lakes, pumping stations and rehabilitation of older water treatment plants. These risks include the potential of explosive gases in tunneling below Lake Huron, changing site conditions associated with the large number of miles of pipe installation and rehabilitating an older WTP, and the startup and debugging of the entire pumping system.

Flint has indicated that they have a high water loss. Not addressing this issue prior to sizing the Flint supply pipeline from KWA could cause the water main to be oversized along with its incremental cost in construction.

Also, the KWA supply option appears to run counter to the Treasury's Competitive Grant Assistance Program (Formerly EVIP Grant). This program has been put in place to allow for communities to consolidate their services and save money. Two existing customers of DWSD (Flint and Genesee County) along with the potential of others customers (GLCUA, Mayfield, Imlay City) separating to from another water system is in contradiction to the program.

Finally, there is a concern over the ability of smaller systems (KWA) over larger systems (DWSD) to pay for future unfunded mandates and regulations. Obviously, identifying regulation requirements over 30 years is hard to determine. However, it is widely accepted that a large system has greater ability to respond to unfunded mandates because the cost can be distributed over a large customer base.

Flint's Autonomy

Flint has indicated that a major point of consideration is that they have no control over the rate increases issued to Flint by DWSD. All other counties supplied by DWSD have representatives on the Board of Water Commissioners (BOWC). The BOWC is one of the governing bodies that approve the water rates. Since Flint and Genesee County do not have a representative on the BOWC, Flint believes they are held "hostage" to DWSD's rates and cost of service.

This issue was stated in Flint's handout at the November 1, 2012 meeting. The handout is titled, "Flint Water Supply Future." However, it is worth noting in the same handout, Flint also identifies similar concerns with the governing board of the KWA system. Notably, that although Flint and Genesee County will be the only customers and Flint will be responsible for 30 percent of the construction cost,

they will have a minority vote on the KWA board. Furthermore, there are other communities (Lapeer County, the City of Lapeer, and Sanilac County) that sit on the board and vote. However, they are not purchasing water nor contributing to the construction costs.

STATE OF MICHIGAN CONTRACT NO. 271N3200089

CITY OF FLINT WATER SUPPLY ASSESSMENT

State of Michigan, Department of Treasury

Appendix A: Meeting Minutes

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MEETING MINUTES

IN ATTENDANCE: Sue McCormick, DWSD Director
Darryl Latimer, DWSD Deputy Director
George Karmo, TYJT
Awni Qaqish, TYJT
Dave Guastella, TYJT

DATE: November 24, 2012

PURPOSE OF MEETING: Meeting with DWSD for the Indefinite-scope, Indefinite-delivery Contract Number 00383, 2012 Professional General Architectural/Engineering Services – City of Flint Water Supply Assessment

PREPARED BY: Dave Guastella

A meeting was held at the DWSD Main Office Building on November 19, 2012 to discuss the water supply options being presented by DWSD to the City of Flint. The main items discussed generally followed the attached DWSD Discussion/Questions that were provided to the Department prior to the meeting. A summary of the key points discussed are provided below.

DISCUSSION ITEMS

1. Question/Discussion Item: Verify that the four options presented at the November 1, 2012 meeting are still available for consideration:

    a. Supplied from Potter & Baxter using the new model contract (assume a Maximum Day Customer),

    b. Supplied from Imlay Station,

    c. Finished un-pumped supply from Lake Huron WTP, and

    d. Raw un-pumped supply from Lake Huron WTP.

    DWSD prefers to focus on the first two supply point listed; from the current location at Potter & Baxter and at the Imlay Pump Station as these apply specifically to Flint.

    DWSD provided the attached summary regarding the current costs to Flint based on the various options that DWSD is offering. The savings associated with each option is provided as well. As example, if Flint were to purchase water from the supply point located at Imlay Station, the current cost to Flint would be $5,661,000 and it would be a savings of nearly 50%

Comments: Meeting minutes were recorded based on the understanding of the author. Please contact the author within three days if you have any different understanding of the meeting. These minutes will be considered approved unless comments are provided within three days.

compared to Flint's current rate.

2. Question/Discussion Item: What additional capital improvements will be required for each option?

   If Imlay Pump Station is selected as the supply point then Flint would need to purchase the 72-inch water main and an agreement to supply Lapeer would need to be worked out. DWSD believes that this could be worked out through a "wheeling" charge over the 72-inch main or possibly moving the supply point downstream of the Lapeer connection.. DWSD estimates the value of the water main at $4.7M. Flint could bond for this amount or DWSD could include the cost into Flint's rate.

3. Question/Discussion Item: Are there other options being presented that should be considered (e.g., blending)?

   Only the two options indicated above are currently being considered and both would include blending; DWSD providing 2/3 of the supply and the Flint WTP providing the other 1/3.

4. Question/Discussion Item: To evaluate each option over the 25 year planning period, provide:

   a. Annual water rate for Flint for 2002 through 2012, and the

   b. Projected annual rate adjustment for each option. What are the proposed measures to keep the rate adjustments down in the future?

   DWSD provided the attached historical rates from 2002 through 2012 for the existing water contract with Flint. The attachment also includes what the rates would have been if Flint had signed the new model contract or had taken service from Imlay. These rates were provided back to 2010.

   DWSD believes that 5% would be a good estimation to assume for their annual escalation in rates over the 25 year planning period.

5. Question/Discussion Item: Flint stated a 10% increase in the capacity charge. What number did DWSD provide Flint?

   It was unclear to DWSD where the 10% increase in capacity charge stated by Flint came from. DWSD's information provided shows an average of 6.3%. DWSD offered a meeting with TYJT to discuss how the fixed and commodity charges are allocated.

6. Question/Discussion Item: Flint financial comparison is based on the initial Cost of $14,413,858, which includes $2,725,538 for Flint WTP operating cost; i.e, DWSD charge is $11,688,320. How good is this number?

   DWSD indicated that the charge of $11,638,320 is good through 6/30/13.based on their existing contract with DWSD.

7. Question/Discussion Item: KWA's initial charge to Flint is based on 12 MGD. Is DWSD charge

based on 12 MGD?

Yes, 12 MGD from DWSD would be a maximum with Flint supplying 6 MGD for a total of 18 MGD (2/3 vs. 1/3).

Comments: Meeting minutes were recorded based on the understanding of the author. Please contact the author within three days if you have any different understanding of the meeting. These minutes will be considered approved unless comments are provided within three days.

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Indefinite-scope, Indefinite-delivery Contract Number 00383
2012 Professional General Architectural/Engineering Services

CITY OF FLINT WATER SUPPLY ASSESSMENT

DWSD Discussion/Questions for the November 19, 2012 Meeting

1. Verify that the four options presented at the November 1, 2012 meeting are still available for consideration:
    c. Supplied from Potter & Baxter using the new model contract (assume a Maximum Day Customer),
    d. Supplied from Imlay Station,
    e. Finished un-pumped supply from Lake Huron WTP, and
    f. Raw un-pumped supply from Lake Huron WTP.
2. What additional capital improvements will be required for each option?
3. Are there other options being presented that should be considered (e.g., blending)?
4. To evaluate each option over the 25 year planning period, provide:
    g. Annual water rate for Flint for 2002 through 2012, and the
    h. Projected annual rate adjustment for each option. What are the proposed measures to keep the rate adjustments down in the future?
5. Flint stated a 10% increase in the capacity charge. What number did DWSD provide Flint?
6. Flint financial comparison is based on the initial Cost of $14,413,858, which includes $2,725,538 for Flint WTP operating cost, i.e DWSD charge is $11,688,320. How good is this number?
7. KWA's initial charge to Flint is based on 12 MGD. Is DWSD charge based on 12 MGD?

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Summary of DWSD Cost Allocations to Flint Under Various Scenarios

Flint Only

	Revenue Requirement	Rates and Charges: Fixed	Rates and Charges: Commodity	Rates and Charges: Avg Unit Cost
1 **Status Quo**	11,461,700	357,271	12.46	19.91
2 **Model Contract**	9,732,100	275,517	11.16	16.90
3 Change	(1,729,600)	(81,754)	(1.30)	(3.00)
4 % Change	*-15.1%*	*-22.9%*	*-10.4%*	*-15.1%*
5 **Max Day Only**	9,424,700	271,010	10.72	16.37
6 Change	(307,400)	(4,507)	(0.44)	(0.53)
7 % Change	*-3.3%*	*-1.7%*	*-4.1%*	*-3.3%*
8 **Allow Blending**	6,302,800	182,369	10.72	16.42
9 Change	(3,121,900)	(88,641)	0.00	0.05
10 % Change	*-49.5%*	*-48.6%*	*0.0%*	*0.3%*
11 **Imlay City Connections**	5,800,700	170,912	9.77	15.11
12 Change	(502,100)	(11,457)	(0.95)	(1.31)
13 % Change	*-8.7%*	*-6.7%*	*-9.7%*	*-8.7%*
14 Cumulative Change	(5,661,000)	(186,359)	(2.69)	(4.80)
15 Cumulative %Change	*-49.4%*	*-52.2%*	*-21.6%*	*-24.1%*

	Assumptions: Avg Day	Max Day	Peak Hour	Distance	Elevation	Sales
	mgd	*mgd*	*mgd*	*miles*	*feet*	*mgd*
1 **Status Quo**	11.8	21.6	22.6	52.0	866	**11.8**
2 **Model Contract**	11.8	**17.9**	**18.8**	52.0	866	11.8
3 **Max Day Only**	11.8	17.9	**17.9**	52.0	866	11.8
4 **Allow Blending**	7.9	**11.9**	**11.9**	52.0	866	7.9
5 **Imlay City Connections**	7.9	11.9	11.9	**45.2**	**866**	7.9

Recent DWSD Water Rates to Flint

	Rates and Charges			Annual Change			*Average*
FY	Fixed	Commodity	Avg Unit Cost	Fixed	Commodity	Avg Unit Cost	*Annual Change*
	$/mo	*$/Mcf*	*$/Mcf*	*$/mo*	*$/Mcf*	*$/Mcf*	
As Charged							
2004		11.06	11.06				
2005		10.24	10.24			-7.4%	
2006		10.56	10.56			3.1%	
2007		11.09	11.09			5.0%	
2008		11.35	11.35			2.3%	
2009		13.07	13.07			15.2%	
2010		14.32	14.32			9.6%	
2011	182,301	14.29	16.01		-0.2%	11.8%	
2012	443,096	13.36	17.53	143.1%	-6.5%	9.5%	
2013	707,000	12.46	19.12	59.6%	-6.7%	9.1%	**6.3%**
Hypothetical Model Contract							
2004		11.06	11.06				
2005		10.24	10.24			-7.4%	
2006		10.56	10.56			3.1%	
2007		11.09	11.09			5.0%	
2008		11.35	11.35			2.3%	
2009		13.07	13.07			15.2%	
2010		***13.96***	***13.96***			6.8%	
2011	***145,918***	***13.74***	***15.28***		-1.6%	9.5%	
2012	***378,968***	***12.58***	***16.57***	159.7%	-8.4%	8.4%	
2013	***597,323***	***11.63***	***17.93***	57.6%	-7.6%	8.2%	**5.5%**

Recent DWSD Water Rates to Flint

FY	Rates and Charges			Annual Change			*Average*
	Fixed	Commodity	Avg Unit Cost	Fixed	Commodity	Avg Unit Cost	*Annual Change*
	$/mo	*$/Mcf*	*$/Mcf*	*$/mo*	*$/Mcf*	*$/Mcf*	
As Charged							
2004		11.06	11.06				
2005		10.24	10.24			-7.4%	
2006		10.56	10.56			3.1%	
2007		11.09	11.09			5.0%	
2008		11.35	11.35			2.3%	
2009		13.07	13.07			15.2%	
2010		14.32	14.32			9.6%	
2011	182,301	14.29	16.01		-0.2%	11.8%	
2012	443,096	13.36	17.53	143.1%	-6.5%	9.5%	
2013	707,000	12.46	19.12	59.6%	-6.7%	9.1%	**6.3%**
*Hypothetical Model Contract - **Flint Only***							
2004		11.06	11.06				
2005		10.24	10.24			-7.4%	
2006		10.56	10.56			3.1%	
2007		11.09	11.09			5.0%	
2008		11.35	11.35			2.3%	
2009		13.07	13.07			15.2%	
2010		***11.73***	***11.73***			-10.3%	
2011	***70,060***	***12.45***	***13.89***		6.1%	18.4%	
2012	***175,882***	***11.47***	***15.08***	151.0%	-7.9%	8.6%	
2013	***272,923***	***10.65***	***16.24***	55.2%	-7.1%	7.7%	**4.4%**

Recent DWSD Water Rates to Flint

FY	Rates and Charges			Annual Change			*Average*
	Fixed	Commodity	Avg Unit Cost	Fixed	Commodity	Avg Unit Cost	*Annual Change*
	$/mo	*$/Mcf*	*$/Mcf*	*$/mo*	*$/Mcf*	*$/Mcf*	
As Charged							
2004		11.06	11.06				
2005		10.24	10.24			-7.4%	
2006		10.56	10.56			3.1%	
2007		11.09	11.09			5.0%	
2008		11.35	11.35			2.3%	
2009		13.07	13.07			15.2%	
2010		14.32	14.32			9.6%	
2011	182,301	14.29	16.01		-0.2%	11.8%	
2012	443,096	13.36	17.53	143.1%	-6.5%	9.5%	
2013	707,000	12.46	19.12	59.6%	-6.7%	9.1%	**6.3%**
*Hypothetical Model Contract - **Flint Only @ Imlay***							
2004		11.06	11.06				
2005		10.24	10.24			-7.4%	
2006		10.56	10.56			3.1%	
2007		11.09	11.09			5.0%	
2008		11.35	11.35			2.3%	
2009		13.07	13.07			15.2%	
2010		***11.16***	***11.16***			-14.6%	
2011	***65,919***	***10.88***	***12.23***		-2.5%	9.6%	
2012	***165,275***	***9.89***	***13.28***	150.7%	-9.1%	8.6%	
2013	***255,580***	***9.09***	***14.32***	54.6%	-8.1%	7.8%	**2.9%**

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MEETING MINUTES

IN ATTENDANCE: Ed Kurtz; Flint Emergency Financial Manager, City of Flint
Dayne Walling; Mayor, City of Flint
Mike Brown, City of Flint
John O'Brien, Genesee County
Howard Croft, City of Flint
Dwayne "Duffy" Johnson, City of Flint
Brent Wright, City of Flint
Awni Qaqish, TYJT
Dave Guastella, TYJT

DATE: November 24, 2012

PURPOSE OF MEETING: Meeting with the City of Flint for the Indefinite-scope, Indefinite-delivery Contract Number 00383, 2012 Professional General Architectural/Engineering Services – City of Flint Water Supply Assessment

PREPARED BY: Dave Guastella

A meeting was held at the City of Flint Municipal Center on November 20, 2012 to discuss the water supply option being presented by the Karegnondi Water Authority (KWA) to the City of Flint. The main items discussed generally followed the attached KWA Discussion/Questions that were provided to City prior to the meeting. A summary of the key points discussed are provided below.

The questions submitted are repeated in the Discussion Items for easy reference. A summary of the action items generated from the meeting follow the Discussion Items.

DISCUSSION ITEMS

1. Question/Discussion Item: Is the maximum day demand of 18 MGD for Flint the maximum day demand (MDD) throughout the 25 year planning period? If not, what is the 25 year projected MDD?

   KWA would supply up to 18 MGD. 18 MGD has been assumed as the maximum day demand and 12 MGD is assumed as the average day demand throughout the 25 year planning period.

2. Question/Discussion Item: Copy of the intake contract documents and engineer's estimate.

   The intake contract documents are approximately 90% complete and are not available for distribution. However, the updated Appendix 20, dated October 4, 2012 includes the most recent cost estimate of the intake based on the current design in process.

Comments: Meeting minutes were recorded based on the understanding of the author. Please contact the author within three days if you have any different understanding of the meeting. These minutes will be considered approved unless comments are provided within three days.

3. Question/Discussion Item: Documentation of the Flint WTP improvements required and cost estimate.

   The costs are approximately $7M as presented in the September 2009 Preliminary Engineering Report. However, this estimate has been updated. Some processes have been eliminated. John O'Brien will provide the updated costs and the description of the planned improvements to the plant.

4. Question/Discussion Item: Confirm Flint's allocated percentage of the KWA capital improvements (30%?).

   Yes, the allocation is based on 18 MGD/60 MGD total capacity.

5. Question/Discussion Item: Copy of the proposed KWA operating agreement for Flint.

   John O'Brien will provide the operating agreement as well as the Capacity Contract and Articles of Incorporation.

6. Question/Discussion Item: What is the annual operating agreement adjustment projected for the 25 year planning period?

   This information is provided in Appendix 14, Table 14.2 of the September 2009 Preliminary Engineering Report. Operating cost based on Table 1. Used 12 MGD as average day demand (ADD). Assumed 5% as the annual increase in operating costs. John O'Brien indicated that these operating costs were based on Genesee County's operating costs. John O'Brien will provide the last 10 years of audited financial statements for the water fund.

   To assess operating and maintenance costs for the Flint WTP, Duffy will provide multiple years of financial statements for the water fund. Duffy did not believe they had 10 years, but they will provide what they have.

   Regarding operation and maintenance costs, Flint believes that these costs will increase by 2/3 of what they are now.

7. Question/Discussion Item: Need the route of the pipelines and the locations of the facilities proposed. Purpose is to identify constraints that impact costs (i.e., utilities, environmental (e.g. wetlands), easements, etc.).

   KWA will not release the route due to concerns regarding speculation of land and easements. John O'Brien did indicate that the Lake Huron pump station would be at Fisher and M-25. The intermediate pump station site is near a location of the Lapeer/Sanilac/St. Clair border; where all three meet.

8. Question/Discussion Item: KWA's initial charge to Flint is based on a 12 MGD average day demand. What is the basis of this number? Are there population projections and water use figures available that were used to determine the Flint demand for the 25 year planning period?

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This was answered in Question No. 1 above.

9. Question/Discussion Item: Is there a transition plan and cost during construction of the KWA system identified?

   Flint is looking for an agreement with DWSD for back-up supply from the 72-inch main at the Genesee border.

10. Question/Discussion Item: The October 4, 2012 Preliminary Engineering Report Update states: "no backup power is planned for the pumps" (LHPS) and "No backup power is planned for pumping" (IPS). In case of power loss, how would Flint supply its customers?

    Flint indicated that they have adequate storage to supply the system for 6 to 7 days. Flint has 55 MG of storage and Genesee County has 65 MG for 2.5 days.

11. Question/Discussion Item: The latest plan shows only a 5 million gallon ground reservoir is planned for balancing between LHPS and IPS. How is redundancy maintained?

    In cases of emergency, Flint indicated that the back-up for the KWA system will be the same as it is now with DWSD; they will use the Flint River as the source water. Flint currently operates their plant four times a year.

    When questioned as to whether the WTP will be able to treat both lake water from the KWA system and river water Flint indicated that once the improvements identified in the September 2009 Preliminary Engineering Report are completed they will be able to accomplish both treatment processes. Flint will provide a schematic of the treatment trains at the WTP and a copy of the Flint transmission system.

    Genesee County indicated that additional redundancy would also be provided from the new Genesee County WTP.

    Regarding hydraulic transients; Genesee County indicated that a model analysis has not been included, but capital costs for mitigating transients have been included.

12. Question/Discussion Item: Related to the construction cost:

    a. Does it include an additional traffic lane since the construction will occupy half the right of way? *Not required, all roads are county roads; however, there are a few State road crossings*.

    b. Does it include costs/fees for permit requirements such as inspection cost by the jurisdictional authorities? As a point of reference, the permit fee costs for the Flint Transmission System came out to be $5.8 million. *Not required; all of the counties have waived any fees.*

    c. Does the cost of the steel pipe segments include corrosion protection measures such as

anode stations and related O&M? *Yes; however, the KWA has not settled on using steel pipe. PCCP pipe may be used. Steel shown in estimate because it is highest in cost and therefore the pricing is conservative.*

d. SCADA monitoring stations require power. Is the cost of bring power to the SCADA stations included? Again, as a point of reference for the Flint Transmission System we estimated $800,000 for power to SCADA and valve operators. *Yes, Genesee County did emphasize that the SCADA system will be simple and straightforward because a lot of controls are not required.*

e. Other items discussed at the meeting included:

- The 2009 plant improvement cost is still good; however, there will be some reduction, such as a sulfuric chloride feed system that was eliminated. Plant capacity now is 36MGD, but will be 18 MGD.
- The KWA Lake Huron Pumping Station (LHPS) is now only high lift pump station.
- Genesee County will provide the distance of the intake pipe from the crib to the LHPS.
- The intake project is almost ready to bid; waiting for the COE permit.
- Genesee County is estimating the construction for the pipe lines and pump stations will begin July 2013.
- The route has been flown for survey.
- Genesee County is estimating construction will be complete and the project will be placed in service by Jan 2016.
- Genesee County to provide a list of assumptions that the $272 million cost estimate is based on since the route is now known.

13. The Flint River is identified as a backup: At what capacity? MDD or emergency supply?

    The Flint River would serve as a back up supply.

14. Where did the 40 years come from (Flint hostage to Detroit)? DWSD's new contracts are 30 years with openers to revise terms of supply (volume and pressure) after the first two years, then three years, and then in five year increments thereafter.

    The 40 years was stated in error. The reference was to DWSD's requirement to sign a 30 year contract.

    After 40 years Flint will own 30% of the project and can sell their share of ownership if they want. Conversely, with DWSD, they continue to pay for the capital projects but have no ownership. Flint believes they will know what they will be charged for the next 25 years versus DWSD that can't commit to a fixed escalation.

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Action Items for Follow-up		
Items:	***Assigned To:***	***Date to Complete***
1. Updated Costs for the Flint WTP Improvements and a description of the improvements.	John O'Brien	11/21/12
2. KWA Operating Agreement, Capacity Contract and Articles of Incorporation.	John O'Brien	11/20/12
3. Provide the last 10 years of audited financial statements for the Genesee water fund.	John O'Brien	11/20/12
4. Provide multiple years of financial statements for the City of Flint water fund.	Duffy Johnson	11/26/12
5. Provide schematic of the Flint WTP and a map of the Flint transmission system.	Brent Wright	11/26/12
6. Provide the length of the intake pipe from the crib to the pump station.	John O'Brien	11/20/12
7. Provide a list of assumptions that the $272 million cost estimate is based on since the route is now known.	John O'Brien	11/26/12

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Indefinite-scope, Indefinite-delivery Contract Number 00383
2012 Professional General Architectural/Engineering Services

CITY OF FLINT WATER SUPPLY ASSESSMENT

KWA Discussion/Questions for the November 20, 2012 Meeting

1. Is the maximum day demand of 18 MGD for Flint the maximum day demand (MDD) throughout the 25 year planning period? If not, what is the 25 year projected MDD?
2. Copy of the intake contract documents and engineer's estimate.
3. Documentation of the Flint WTP improvements required and cost estimate.
4. Confirm Flint's allocated percentage of the KWA capital improvements (30%?).
5. Copy of the proposed KWA operating agreement for Flint.
6. What is the annual operating agreement adjustment projected for the 25 year planning period?
7. Need the route of the pipelines and the locations of the facilities proposed. Purpose is to identify constraints that impact costs (i.e., utilities, environmental (e.g. wetlands), easements, etc.).
8. KWA's initial charge to Flint is based on a 12 MGD maximum day demand. What is the basis of this number? Are there population projections and water use figures available that were used to determine the Flint demand for the 25 year planning period?
9. Is there a transition plan and cost during construction of the KWA system identified?
10. The October 4, 2012 Preliminary Engineering Report Update states: "no backup power is planned for the pumps" (LHPS) and "No backup power is planned for pumping" (IPS). In case of power loss, how would Flint supply its customers?
11. The latest plan shows only a 5 million gallon ground reservoir is planned for balancing between LHPS and IPS. How is redundancy maintained?
12. Related to the construction cost:
    a. Does it include an additional traffic lane since the construction will occupy half the right of way?
    b. Does it include costs/fees for permit requirements such as inspection cost by the jurisdictional authorities? As a point of reference, the permit fee costs for the Flint Transmission System came out to be $5.8 million.

Comments: Meeting minutes were recorded based on the understanding of the author. Please contact the author within three days if you have any different understanding of the meeting. These minutes will be considered approved unless comments are provided within three days.

c. Does the cost of the steel pipe segments include corrosion protection measures such as anode stations and related O&M?
d. SCADA monitoring stations require power. Is the cost of bring power to the SCADA stations included? Again, as a point of reference the for the Flint Transmission System we estimated $800,000 for power to SCADA and valve operators.

13. The Flint River is identified as a backup: At what capacity? MDD or emergency supply?
14. Where did the 40 years come from (Flint hostage to Detroit)? DWSD's new contracts are 30 years with openers to revise terms of supply (volume and pressure) after the first two years, then three years, and then in five year increments thereafter.

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STATE OF MICHIGAN CONTRACT NO. 271N3200089

CITY OF FLINT WATER SUPPLY ASSESSMENT

State of Michigan, Department of Treasury

Appendix B: Cost Worksheets

DWSD Worksheet : 18 MGD Maximum Day Customer with Model Contract at Potter & Baxter

Capacity

Flint ADD:	0.60	MGD	81 MCF/Day
DWSD ADD:	12	MGD	1,604 MCF/Day

Annual Volume

Flint:	29,412	MCF
DWSD:	585,561	MCF

2013 Cost of Supply

Flint WTP O&M:	120.30	/MCF	$ 3,538,214	/Yr
DWSD: $	16.37	/MCF	$ 9,585,642	/Yr

Escalation/Inflation Rate

Flint:	4.51% /Yr
DWSD:	4.7% /Yr

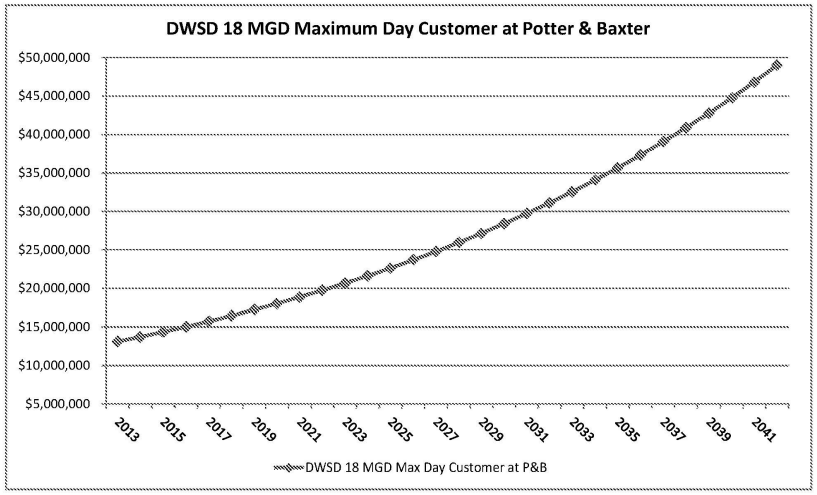
Capital Expenditure

Amount:	$ -			
Reserve:	$ -	0%	Reserve Rate:	0.00%
Amount plus Reserve:	$ -			
Revenue Bond Rate:	5%			
Number of Years:	25			
Annual Cost:	$0			

	Year	Flint WTP O&M	Water Purchase	Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	$ 3,538,214	9,585,642		-	**$ 13,123,856**
2	2014	$ 3,697,788	10,036,167		-	**$ 13,733,955**
3	2015	$ 3,864,558	10,507,867		-	**$ 14,372,425**
4	2016	$ 4,038,850	11,001,736	-	-	**$ 15,040,586**
5	2017	$ 4,221,002	11,518,818	-	-	**$ 15,739,820**
6	2018	$ 4,411,369	12,060,203	-	-	**$ 16,471,571**
7	2019	$ 4,610,322	12,627,032	-	-	**$ 17,237,354**
8	2020	$ 4,818,247	13,220,503	-	-	**$ 18,038,750**
9	2021	$ 5,035,550	13,841,866	-	-	**$ 18,877,416**
10	2022	$ 5,262,653	14,492,434	-	-	**$ 19,755,087**
11	2023	$ 5,499,999	15,173,578	-	-	**$ 20,673,577**
12	2024	$ 5,748,049	15,886,736	-	-	**$ 21,634,785**
13	2025	$ 6,007,286	16,633,413	-	-	**$ 22,640,699**
14	2026	$ 6,278,215	17,415,183	-	-	**$ 23,693,398**
15	2027	$ 6,561,362	18,233,697	-	-	**$ 24,795,059**
16	2028	$ 6,857,279	19,090,681	-	-	**$ 25,947,960**
17	2029	$ 7,166,543	19,987,943	-	-	**$ 27,154,486**
18	2030	$ 7,489,754	20,927,376	-	-	**$ 28,417,130**
19	2031	$ 7,827,542	21,910,963	-	-	**$ 29,738,505**
20	2032	$ 8,180,564	22,940,778	-	-	**$ 31,121,342**
21	2033	$ 8,549,507	24,018,995	-	-	**$ 32,568,502**
22	2034	$ 8,935,090	25,147,887	-	-	**$ 34,082,977**
23	2035	$ 9,338,063	26,329,838	-	-	**$ 35,667,901**
24	2036	$ 9,759,209	27,567,341	-	-	**$ 37,326,550**
25	2037	$ 10,199,350	28,863,006	-	-	**$ 39,062,355**
	2038	$ 10,659,340	30,219,567	-	-	**$ 40,878,907**
	2039	$ 11,140,076	31,639,886	-	-	**$ 42,779,963**
	2040	$ 11,642,494	33,126,961	-	-	**$ 44,769,455**
	2041	$ 12,167,570	34,683,928	-	-	**$ 46,851,499**
	2042	$ 12,716,328	36,314,073	-	-	**$ 49,030,401**
		$ 216,222,171				

25 Yrs Cummulative	
$	596,916,044

30 Yrs Cummulative	
$	821,226,268



DWSD Worksheet : 12 MGD Maximum Day Customer with Model Contract at Potter & Baxter/Blending with Flint

Capacity

Flint ADD:	4	MGD	535	MCF/Day
DWSD ADD:	8	MGD	1,070	MCF/Day

Annual Volume

Flint:	195,187	MCF	195187.1658
DWSD:	390,374	MCF	
			5895097.471

2013 Cost of Supply

Flint WTP O&M:	$	30.20	/MCF	$ 5,895,097	/Yr
DWSD:	$	16.31	/MCF	$ 6,367,005	/Yr

Escalation/Inflation Rate

Flint:	4.51% /Yr
DWSD:	4.7% /Yr

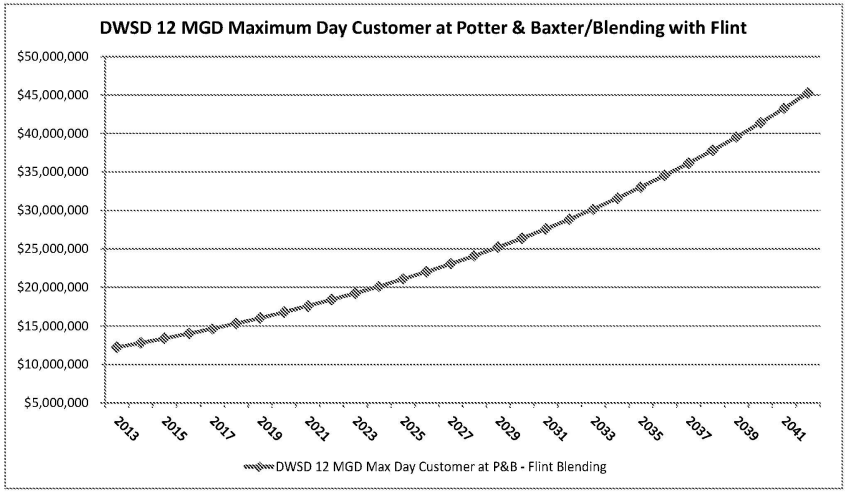
Capital Expenditure

Amount:	$	-		
Reserve:	$	-	0%	Reserve Rate: 0.00%
Amount plus Reserve:	$	-		
Revenue Bond Rate:		5%		
Number of Years:		25		
Annual Cost:	$0			

	Year	Flint WTP O&M	Water Purchase	Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	$ 5,895,097	6,367,005		-	$ 12,262,103
2	2014	$ 6,160,966	6,666,255		-	$ 12,827,221
3	2015	$ 6,438,826	6,979,569		-	$ 13,418,395
4	2016	$ 6,729,217	7,307,608	-	-	$ 14,036,825
5	2017	$ 7,032,705	7,651,066	-	-	$ 14,683,771
6	2018	$ 7,349,880	8,010,666	-	-	$ 15,360,546
7	2019	$ 7,681,359	8,387,167	-	-	$ 16,068,527
8	2020	$ 8,027,789	8,781,364	-	-	$ 16,809,153
9	2021	$ 8,389,842	9,194,088	-	-	$ 17,583,930
10	2022	$ 8,768,224	9,626,210	-	-	$ 18,394,434
11	2023	$ 9,163,671	10,078,642	-	-	$ 19,242,313
12	2024	$ 9,576,952	10,552,338	-	-	$ 20,129,291
13	2025	$ 10,008,873	11,048,298	-	-	$ 21,057,171
14	2026	$ 10,460,273	11,567,568	-	-	$ 22,027,841
15	2027	$ 10,932,031	12,111,244	-	-	$ 23,043,275
16	2028	$ 11,425,066	12,680,473	-	-	$ 24,105,538
17	2029	$ 11,940,336	13,276,455	-	-	$ 25,216,791
18	2030	$ 12,478,845	13,900,448	-	-	$ 26,379,294
19	2031	$ 13,041,641	14,553,769	-	-	$ 27,595,410
20	2032	$ 13,629,819	15,237,796	-	-	$ 28,867,616
21	2033	$ 14,244,524	15,953,973	-	-	$ 30,198,497
22	2034	$ 14,886,952	16,703,810	-	-	$ 31,590,762
23	2035	$ 15,558,354	17,488,889	-	-	$ 33,047,242
24	2036	$ 16,260,035	18,310,866	-	-	$ 34,570,902
25	2037	$ 16,993,363	19,171,477	-	-	$ 36,164,840
	2038	$ 17,759,764	20,072,537	-	-	$ 37,832,300
	2039	$ 18,560,729	21,015,946	-	-	$ 39,576,675
	2040	$ 19,397,818	22,003,695	-	-	$ 41,401,513
	2041	$ 20,272,660	23,037,869			$ 43,310,528
	2042	$ 21,186,956	24,120,649			$ 45,307,605

25 Yrs Cummulative
$ 554,681,686

30 Yrs Cummulative
$ 762,110,308



DWSD Worksheet : 8 MGD Maximum Day Customer with Model Contract at Potter & Baxter/Blending with Flint

Capacity

Flint ADD:	4	MGD	535	MCF/Day
DWSD ADD:	8	MGD	1,070	MCF/Day

Annual Volume

Flint:	195,187	MCF
DWSD:	390,374	MCF

2013 Cost of Supply

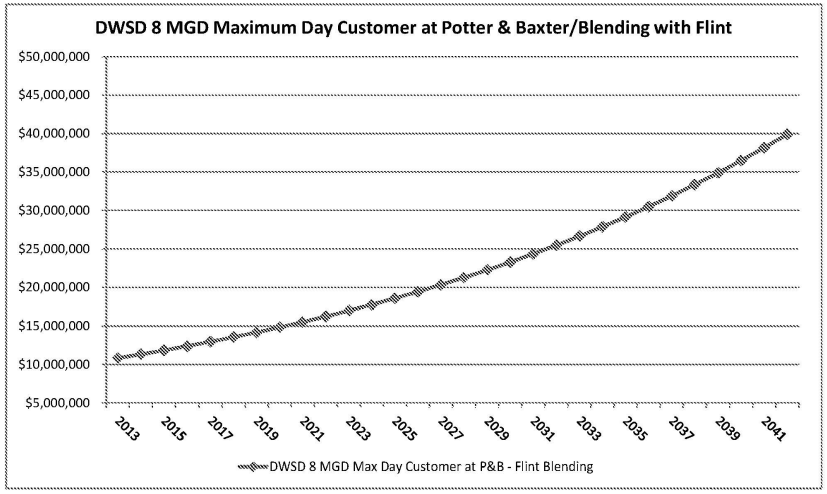
Flint WTP O&M:	$ 30.20	/MCF	$ 5,895,097	/Yr
DWSD:	$ 12.68	/MCF	$ 4,949,947	/Yr

Escalation/Inflation Rate

Flint:	4.51% /Yr
DWSD:	4.7% /Yr

Capital Expenditure

Amount:	$ -			
Reserve:	$ -	0%	Reserve Rate:	0.00%
Amount plus Reserve:	$ -			
Revenue Bond Rate:	5%			
Number of Years:	25			
Annual Cost:	$0			



	Year	Flint WTP O&M	Water Purchase	Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	$ 5,895,097	4,949,947		-	$ 10,845,044
2	2014	$ 6,160,966	5,182,594		-	$ 11,343,560
3	2015	$ 6,438,826	5,426,176		-	$ 11,865,002
4	2016	$ 6,729,217	5,681,206	-	-	$ 12,410,423
5	2017	$ 7,032,705	5,948,223	-	-	$ 12,980,928
6	2018	$ 7,349,880	6,227,789	-	-	$ 13,577,669
7	2019	$ 7,681,359	6,520,495	-	-	$ 14,201,855
8	2020	$ 8,027,789	6,826,959	-	-	$ 14,854,747
9	2021	$ 8,389,842	7,147,826	-	-	$ 15,537,668
10	2022	$ 8,768,224	7,483,774	-	-	$ 16,251,997
11	2023	$ 9,163,671	7,835,511	-	-	$ 16,999,182
12	2024	$ 9,576,952	8,203,780	-	-	$ 17,780,732
13	2025	$ 10,008,873	8,589,358	-	-	$ 18,598,230
14	2026	$ 10,460,273	8,993,057	-	-	$ 19,453,330
15	2027	$ 10,932,031	9,415,731	-	-	$ 20,347,762
16	2028	$ 11,425,066	9,858,271	-	-	$ 21,283,336
17	2029	$ 11,940,336	10,321,609	-	-	$ 22,261,945
18	2030	$ 12,478,845	10,806,725	-	-	$ 23,285,570
19	2031	$ 13,041,641	11,314,641	-	-	$ 24,356,282
20	2032	$ 13,629,819	11,846,429	-	-	$ 25,476,248
21	2033	$ 14,244,524	12,403,211	-	-	$ 26,647,735
22	2034	$ 14,886,952	12,986,162	-	-	$ 27,873,114
23	2035	$ 15,558,354	13,596,512	-	-	$ 29,154,866
24	2036	$ 16,260,035	14,235,548	-	-	$ 30,495,583
25	2037	$ 16,993,363	14,904,619	-	-	$ 31,897,982
	2038	$ 17,759,764	15,605,136	-	-	$ 33,364,899
	2039	$ 18,560,729	16,338,577	-	-	$ 34,899,306
	2040	$ 19,397,818	17,106,490	-	-	$ 36,504,308
	2041	$ 20,272,660	17,910,495			$ 38,183,155
	2042	$ 21,186,956	18,752,288			$ 39,939,245

25 Yrs Cummulative
$ 489,780,792

30 Yrs Cummulative
$ 672,671,705

DWSD Worksheet : 12 MGD Maximum Day Customer with Model Contract at Imlay/Blending with Flint

Capacity

Flint ADD:	4	MGD	535 MCF/Day
DWSD ADD:	8	MGD	1,070 MCF/Day

Annual Volume

Flint:	195,187 MCF
DWSD:	390,374 MCF

2013 Cost of Supply

Flint WTP O&M:	$ 30.20	/MCF	$ 5,895,097	/Yr
DWSD:	$ 14.38	/MCF	$ 5,613,583	/Yr

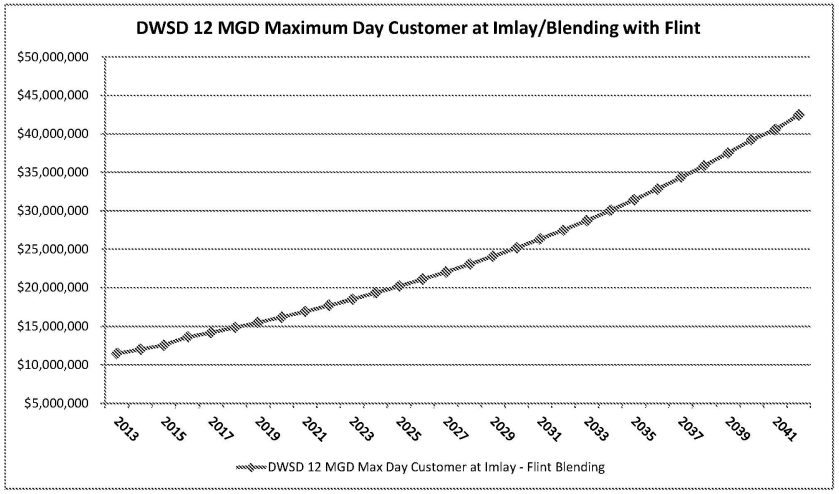
Escalation/Inflation Rate

Flint:	4.51% /Yr
DWSD:	4.7% /Yr

Capital Expenditure

Capital:	$ 4,700,000		
Bond Issuance (3% of Total):	195,000	Check:	3.0%
3 Years of Capitalized Interest:	975,000	Check:	5.0% /Yr (Bond Interest on Total)
Reserve (10% of Total):	650,000	Check:	10.0%
Total:	$ 6,520,000		

Revenue Bond Rate:	5%
Number of Years:	25
Annual Cost:	$462,610
Interest on Reserve:	3%



	Year	Flint WTP O&M	Water Purchase	Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	$ 5,895,097	5,613,583		19,500	**$ 11,489,180**
2	2014	$ 6,160,966	5,877,421		19,500	**$ 12,018,888**
3	2015	$ 6,438,826	6,153,660		19,500	**$ 12,572,986**
4	2016	$ 6,729,217	6,442,882	462,610	19,500	**$ 13,615,209**
5	2017	$ 7,032,705	6,745,698	462,610	19,500	**$ 14,221,512**
6	2018	$ 7,349,880	7,062,745	462,610	19,500	**$ 14,855,735**
7	2019	$ 7,681,359	7,394,694	462,610	19,500	**$ 15,519,164**
8	2020	$ 8,027,789	7,742,245	462,610	19,500	**$ 16,213,144**
9	2021	$ 8,389,842	8,106,131	462,610	19,500	**$ 16,939,082**
10	2022	$ 8,768,224	8,487,119	462,610	19,500	**$ 17,698,452**
11	2023	$ 9,163,671	8,886,013	462,610	19,500	**$ 18,492,794**
12	2024	$ 9,576,952	9,303,656	462,610	19,500	**$ 19,323,718**
13	2025	$ 10,008,873	9,740,928	462,610	19,500	**$ 20,192,910**
14	2026	$ 10,460,273	10,198,751	462,610	19,500	**$ 21,102,134**
15	2027	$ 10,932,031	10,678,093	462,610	19,500	**$ 22,053,234**
16	2028	$ 11,425,066	11,179,963	462,610	19,500	**$ 23,048,139**
17	2029	$ 11,940,336	11,705,421	462,610	19,500	**$ 24,088,867**
18	2030	$ 12,478,845	12,255,576	462,610	19,500	**$ 25,177,531**
19	2031	$ 13,041,641	12,831,588	462,610	19,500	**$ 26,316,339**
20	2032	$ 13,629,819	13,434,673	462,610	19,500	**$ 27,507,602**
21	2033	$ 14,244,524	14,066,102	462,610	19,500	**$ 28,753,736**
22	2034	$ 14,886,952	14,727,209	462,610	19,500	**$ 30,057,271**
23	2035	$ 15,558,354	15,419,388	462,610	19,500	**$ 31,420,852**
24	2036	$ 16,260,035	16,144,099	462,610	19,500	**$ 32,847,245**
25	2037	$ 16,993,363	16,902,872	462,610	19,500	**$ 34,339,345**
	2038	$ 17,759,764	17,697,307	462,610	19,500	**$ 35,900,181**
	2039	$ 18,560,729	18,529,080	462,610	19,500	**$ 37,532,919**
	2040	$ 19,397,818	19,399,947	462,610	19,500	**$ 39,240,875**
	2041	$ 20,272,660	20,311,745			**$ 40,584,404**
	2042	$ 21,186,956	21,266,397			**$ 42,453,353**

25 Yrs Cummulative	
$	529,865,071

30 Yrs Cummulative	
$	725,576,803

DWSD Worksheet : 8 MGD Maximum Day Customer with Model Contract at Imlay/Blending with Flint

Capacity

Flint ADD:	4	MGD	535	MCF/Day
DWSD ADD:	8	MGD	1,070	MCF/Day

Annual Volume

Flint:	195,187	MCF
DWSD:	390,374	MCF

2013 Cost of Supply

Flint WTP O&M:	$ 30.20	/MCF	$ 5,895,097	/Yr
DWSD:	$ 11.11	/MCF	$ 4,337,059	/Yr

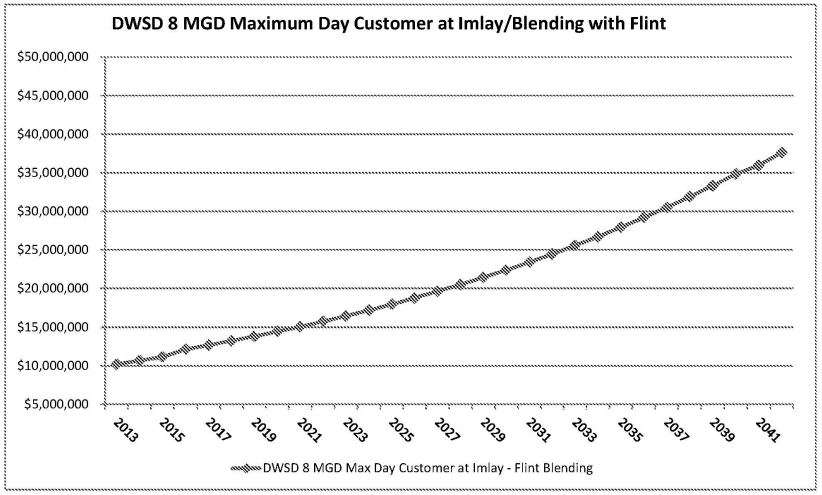
Escalation/Inflation Rate

Flint:	4.51% /Yr
DWSD:	4.7% /Yr

Capital Expenditure

Capital:	$ 4,700,000			
Bond Issuance (3% of Total):	195,000	Check:	3.0%	
3 Years of Capitalized Interest:	975,000	Check:	5.0%	/Yr (Bond Interest on Total)
Reserve (10% of Total):	650,000	Check:	10.0%	
Total:	$ 6,520,000			

Revenue Bond Rate:	5%
Number of Years:	25
Annual Cost:	$462,610
Interest on Reserve:	3%



	Year	Flint WTP O&M	Water Purchase	Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	$ 5,895,097	4,337,059		19,500	**$ 10,212,656**
2	2014	$ 6,160,966	4,540,901		19,500	**$ 10,682,367**
3	2015	$ 6,438,826	4,754,323		19,500	**$ 11,173,649**
4	2016	$ 6,729,217	4,977,776	462,610	19,500	**$ 12,150,103**
5	2017	$ 7,032,705	5,211,732	462,610	19,500	**$ 12,687,546**
6	2018	$ 7,349,880	5,456,683	462,610	19,500	**$ 13,249,673**
7	2019	$ 7,681,359	5,713,147	462,610	19,500	**$ 13,837,616**
8	2020	$ 8,027,789	5,981,665	462,610	19,500	**$ 14,452,564**
9	2021	$ 8,389,842	6,262,803	462,610	19,500	**$ 15,095,755**
10	2022	$ 8,768,224	6,557,155	462,610	19,500	**$ 15,768,489**
11	2023	$ 9,163,671	6,865,341	462,610	19,500	**$ 16,472,122**
12	2024	$ 9,576,952	7,188,012	462,610	19,500	**$ 17,208,074**
13	2025	$ 10,008,873	7,525,849	462,610	19,500	**$ 17,977,832**
14	2026	$ 10,460,273	7,879,564	462,610	19,500	**$ 18,782,947**
15	2027	$ 10,932,031	8,249,903	462,610	19,500	**$ 19,625,044**
16	2028	$ 11,425,066	8,637,649	462,610	19,500	**$ 20,505,824**
17	2029	$ 11,940,336	9,043,618	462,610	19,500	**$ 21,427,064**
18	2030	$ 12,478,845	9,468,668	462,610	19,500	**$ 22,390,624**
19	2031	$ 13,041,641	9,913,696	462,610	19,500	**$ 23,398,447**
20	2032	$ 13,629,819	10,379,639	462,610	19,500	**$ 24,452,569**
21	2033	$ 14,244,524	10,867,482	462,610	19,500	**$ 25,555,117**
22	2034	$ 14,886,952	11,378,254	462,610	19,500	**$ 26,708,316**
23	2035	$ 15,558,354	11,913,032	462,610	19,500	**$ 27,914,496**
24	2036	$ 16,260,035	12,472,945	462,610	19,500	**$ 29,176,090**
25	2037	$ 16,993,363	13,059,173	462,610	19,500	**$ 30,495,646**
	2038	$ 17,759,764	13,672,954	462,610	19,500	**$ 31,875,828**
	2039	$ 18,560,729	14,315,583	462,610	19,500	**$ 33,319,422**
	2040	$ 19,397,818	14,988,415	462,610	19,500	**$ 34,829,343**
	2041	$ 20,272,660	15,692,871			**$ 35,965,530**
	2042	$ 21,186,956	16,430,436			**$ 37,617,392**

25 Yrs Cummulative	
$	**493,063,801**

30 Yrs Cummulative	
$	**634,795,488**

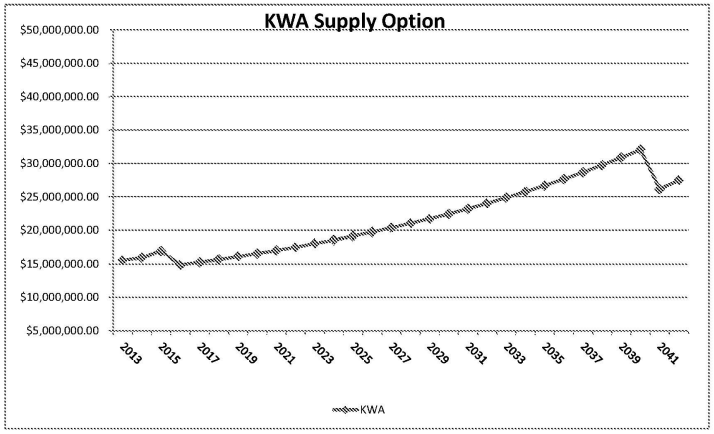
KWA Supply Option Worksheet

KWA 10/31/12 No Overruns

	Year	DWSD & Flint WTP Costs	KWA Entry Fee	KWA Debt service	Flint WTP Debt Service	KWA Operations	Flint WTP Operations with KWA	TOTAL
1	2013	$ 14,413,858	1,162,800					**$ 15,576,658**
2	2014	$ 15,355,135	581,400					**$ 15,936,535**
3	2015	$ 16,365,534	581,400					**$ 16,946,934**
4	2016			6,593,155	572,781	878,869	6,843,344	**$ 14,888,149**
5	2017			6,593,155	572,781	922,812	7,185,511	**$ 15,274,260**
6	2018			6,593,155	572,781	968,953	7,544,787	**$ 15,679,676**
7	2019			6,593,155	572,781	1,017,401	7,922,026	**$ 16,105,363**
8	2020			6,593,155	572,781	1,068,271	8,318,127	**$ 16,552,334**
9	2021			6,593,155	572,781	1,121,684	8,734,034	**$ 17,021,654**
10	2022			6,593,155	572,781	1,177,769	9,170,735	**$ 17,514,440**
11	2023			6,593,155	572,781	1,236,657	9,629,272	**$ 18,031,865**
12	2024			6,593,155	572,781	1,298,490	10,110,736	**$ 18,575,162**
13	2025			6,593,155	572,781	1,363,414	10,616,273	**$ 19,145,623**
14	2026			6,593,155	572,781	1,431,585	11,147,086	**$ 19,744,607**
15	2027			6,593,155	572,781	1,503,164	11,704,441	**$ 20,373,541**
16	2028			6,593,155	572,781	1,578,322	12,289,663	**$ 21,033,921**
17	2029			6,593,155	572,781	1,657,239	12,904,146	**$ 21,727,320**
18	2030			6,593,155	572,781	1,740,101	13,549,353	**$ 22,455,390**
19	2031			6,593,155	572,781	1,827,106	14,226,821	**$ 23,219,862**
20	2032			6,593,155	572,781	1,918,461	14,938,162	**$ 24,022,559**
21	2033			6,593,155	572,781	2,014,384	15,685,070	**$ 24,865,390**
22	2034			6,593,155	572,781	2,115,103	16,469,323	**$ 25,750,362**
23	2035			6,593,155	572,781	2,220,858	17,292,789	**$ 26,679,584**
24	2036			6,593,155	572,781	2,331,901	18,157,429	**$ 27,655,266**
25	2037			6,593,155	572,781	2,448,496	19,065,300	**$ 28,679,733**
	2038			6,593,155	572,781	2,570,921	20,018,565	**$ 29,755,422**
	2039			6,593,155	572,781	2,699,467	21,019,494	**$ 30,884,897**
	2040			6,593,155	572,781	2,834,440	22,070,468	**$ 32,070,845**
	2041					2,976,162	23,173,992	**$ 26,150,154**
	2042					3,124,970	24,332,691	**$ 27,457,662**

25 Yrs Cummulative	
$	503,456,186

30 Yrs Cummulative	
$	649,775,166



KWA Supply Option Worksheet

KWA-1

Capacity

Flint ADD:	12	MGD	1,604	MCF/Day
KWA ADD:	12	MGD	1,604	MCF/Day

Annual Volume

Flint:	585,561	MCF
KWA:	585,561	MCF

2016 Cost of Supply

Flint WTP O&M:	13.51	/MCF	$ 7,913,118	/Yr
KWA:	$ 1.50	/MCF	$ 878,869	/Yr

Escalation/Inflation Rate

Flint:	4.51%	/Yr
KWA:	5.0%	/Yr

Capital Expenditure

David Guastella: Assumes Bond Issuance and Reserves are not included

Capital:	$ 272,423,558			
Bond Issuance (2.25% of Total):	8,448,000	Check:	2.25%	
3 Years of Capitalized Interest:	56,088,000	Check:	5.0%	/Yr (Bond Interest on Total)
Reserve (10% of Total):	37,500,000	Check:	10.0%	
Total:	$ 374,361,558			
Flint's Share (30%)	$ 112,308,467			
Revenue Bond Rate:	5%			
Number of Years:	25			
Annual Cost:	$7,968,562			
Interest on Reserve:	3%			

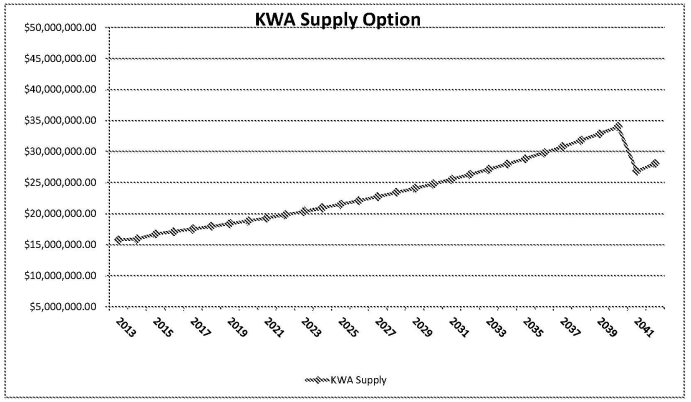
David Guastella: Increased by 3%/Yr to 2012 $'s

Capital:	$ 7,758,362			
Bond Issuance (3% of Total):	240,000	Check:	2.25%	
3 Years of Capitalized Interest:	1,600,000	Check:	5.0%	/Yr (Bond Interest on Total)
Reserve (10% of Total):	1,070,000	Check:	10.0%	
Total:	$ 10,668,362			
Revenue Bond Rate:	5%			
Number of Years:	25			
Annual Cost:	$756,946			
Interest on Reserve:	3%			

David Guastella: Flint buys water from DWSD for three years during KWA construction at current rate (assume 5% increase each year)

David Guastella: Highlighted portion is Flint's Entry Fee to KWA

	Year	Flint WTP O&M	Water Purchase	KWA Revenue Pre-bond Entry Fee & Bond Payment	Flint Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	*$ 3,538,214*	*11,461,700*	1,162,800		369,600	$ 15,793,114
2	2014	*$ 3,697,788*	*12,034,785*	581,400		369,600	$ 15,944,373
3	2015	*$ 3,864,558*	*12,636,524*	581,400		369,600	$ 16,712,882
4	2016	$ 7,913,118	878,869	7,968,562	756,946	369,600	$ 17,147,896
5	2017	$ 8,270,000	922,812	7,968,562	756,946	369,600	$ 17,548,721
6	2018	$ 8,642,977	968,953	7,968,562	756,946	369,600	$ 17,967,838
7	2019	$ 9,032,775	1,017,401	7,968,562	756,946	369,600	$ 18,406,084
8	2020	$ 9,440,153	1,068,271	7,968,562	756,946	369,600	$ 18,864,332
9	2021	$ 9,865,904	1,121,684	7,968,562	756,946	369,600	$ 19,343,497
10	2022	$ 10,310,857	1,177,769	7,968,562	756,946	369,600	$ 19,844,533
11	2023	$ 10,775,876	1,236,657	7,968,562	756,946	369,600	$ 20,368,441
12	2024	$ 11,261,868	1,298,490	7,968,562	756,946	369,600	$ 20,916,266
13	2025	$ 11,769,779	1,363,414	7,968,562	756,946	369,600	$ 21,489,101
14	2026	$ 12,300,596	1,431,585	7,968,562	756,946	369,600	$ 22,088,089
15	2027	$ 12,855,352	1,503,164	7,968,562	756,946	369,600	$ 22,714,425
16	2028	$ 13,435,129	1,578,322	7,968,562	756,946	369,600	$ 23,369,359
17	2029	$ 14,041,053	1,657,239	7,968,562	756,946	369,600	$ 24,054,200
18	2030	$ 14,674,305	1,740,101	7,968,562	756,946	369,600	$ 24,770,313
19	2031	$ 15,336,116	1,827,106	7,968,562	756,946	369,600	$ 25,519,130
20	2032	$ 16,027,775	1,918,461	7,968,562	756,946	369,600	$ 26,302,144
21	2033	$ 16,750,627	2,014,384	7,968,562	756,946	369,600	$ 27,120,919
22	2034	$ 17,506,080	2,115,103	7,968,562	756,946	369,600	$ 27,977,092
23	2035	$ 18,295,605	2,220,858	7,968,562	756,946	369,600	$ 28,872,371
24	2036	$ 19,120,737	2,331,901	7,968,562	756,946	369,600	$ 29,808,546
25	2037	$ 19,983,082	2,448,496	7,968,562	756,946	369,600	$ 30,787,486
	2038	$ 20,884,319	2,570,921	7,968,562	756,946	369,600	$ 31,811,148
	2039	$ 21,826,201	2,699,467	7,968,562	756,946	369,600	$ 32,881,577
	2040	$ 22,810,563	2,834,440	7,968,562	756,946	369,600	$ 34,000,912
	2041	$ 23,839,320	2,976,162				$ 26,815,482
	2042	$ 24,914,473	3,124,970				$ 28,039,443



25 Yrs Cummulative
$ 553,731,153

30 Yrs Cummulative
$ 707,279,715

KWA Supply Option Worksheet

KWA-2

Capacity

Flint ADD:	12	MGD	1,604	MCF/Day
KWA ADD:	12	MGD	1,604	MCF/Day

Annual Volume

Flint:	585,561	MCF
KWA:	585,561	MCF

2016 Cost of Supply

Flint WTP O&M:	$ 13.51	/MCF	$ 7,913,118	/Yr
KWA:	$ 1.50	/MCF	$ 878,869	/Yr

Escalation/Inflation Rate

Flint:	4.51% /Yr
KWA:	5.0% /Yr

Capital Expenditure

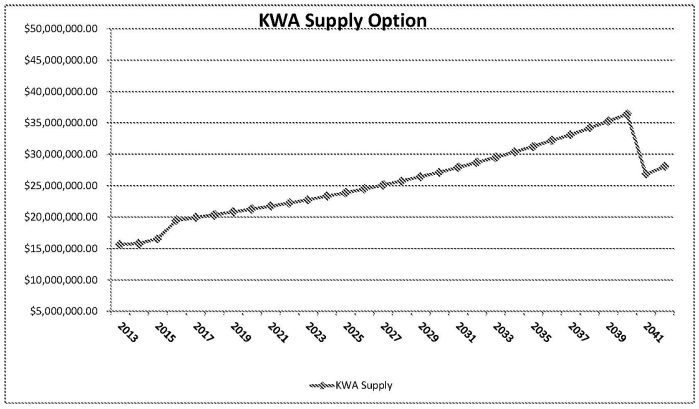
Capital:	$ 357,578,060		
Bond Issuance (2.25% of Total):	11,050,000	Check:	2.25%
3 Years of Capitalized Interest:	74,000,000	Check:	5.0% /Yr (Bond Interest on Total)
Reserve (10% of Total):	49,000,000	Check:	10.0%
Total:	$ 491,628,060		
Flint's Share (30%)	$ 147,488,418		

Revenue Bond Rate:	5%
Number of Years:	25
Annual Cost:	$10,464,666
Interest on Reserve:	3%

Capital:	$ 7,758,362		
Bond Issuance (3% of Total):	240,000	Check:	2.25%
3 Years of Capitalized Interest:	1,600,000	Check:	5.0% /Yr (Bond Interest on Total)
Reserve (10% of Total):	1,070,000	Check:	10.0%
Total:	$ 10,668,362		

Revenue Bond Rate:	5%
Number of Years:	25
Annual Cost:	$756,946
Interest on Reserve:	3%

	Year	Flint WTP O&M	Water Purchase	KWA Revenue Pre-bond Entry Fee & Bond Payment	Flint Revenue Bond Payment	Interest on Reserve	TOTAL
1	2013	$ ***3,538,214***	***11,461,700***	1,162,800		473,100	$ **15,689,614**
2	2014	$ ***3,697,788***	***12,034,785***	581,400		473,100	$ **15,840,873**
3	2015	$ ***3,864,558***	***12,636,524***	581,400		473,100	$ **16,609,382**
4	2016	$ 7,913,118	878,869	10,464,666	756,946	473,100	$ **19,540,500**
5	2017	$ 8,270,000	922,812	10,464,666	756,946	473,100	$ **19,941,325**
6	2018	$ 8,642,977	968,953	10,464,666	756,946	473,100	$ **20,360,442**
7	2019	$ 9,032,775	1,017,401	10,464,666	756,946	473,100	$ **20,798,688**
8	2020	$ 9,440,153	1,068,271	10,464,666	756,946	473,100	$ **21,256,936**
9	2021	$ 9,865,904	1,121,684	10,464,666	756,946	473,100	$ **21,736,101**
10	2022	$ 10,310,857	1,177,769	10,464,666	756,946	473,100	$ **22,237,137**
11	2023	$ 10,775,876	1,236,657	10,464,666	756,946	473,100	$ **22,761,045**
12	2024	$ 11,261,868	1,298,490	10,464,666	756,946	473,100	$ **23,308,870**
13	2025	$ 11,769,779	1,363,414	10,464,666	756,946	473,100	$ **23,881,705**
14	2026	$ 12,300,596	1,431,585	10,464,666	756,946	473,100	$ **24,480,693**
15	2027	$ 12,855,352	1,503,164	10,464,666	756,946	473,100	$ **25,107,029**
16	2028	$ 13,435,129	1,578,322	10,464,666	756,946	473,100	$ **25,761,963**
17	2029	$ 14,041,053	1,657,239	10,464,666	756,946	473,100	$ **26,446,804**
18	2030	$ 14,674,305	1,740,101	10,464,666	756,946	473,100	$ **27,162,917**
19	2031	$ 15,336,116	1,827,106	10,464,666	756,946	473,100	$ **27,911,733**
20	2032	$ 16,027,775	1,918,461	10,464,666	756,946	473,100	$ **28,694,748**
21	2033	$ 16,750,627	2,014,384	10,464,666	756,946	473,100	$ **29,513,523**
22	2034	$ 17,506,080	2,115,103	10,464,666	756,946	473,100	$ **30,369,696**
23	2035	$ 18,295,605	2,220,858	10,464,666	756,946	473,100	$ **31,264,975**
24	2036	$ 19,120,737	2,331,901	10,464,666	756,946	473,100	$ **32,201,150**
25	2037	$ 19,983,082	2,448,496	10,464,666	756,946	473,100	$ **33,180,090**
	2038	$ 20,884,319	2,570,921	10,464,666	756,946	473,100	$ **34,203,752**
	2039	$ 21,826,201	2,699,467	10,464,666	756,946	473,100	$ **35,274,181**
	2040	$ 22,810,563	2,834,440	10,464,666	756,946	473,100	$ **36,393,516**
	2041	$ 23,839,320	2,976,162				$ **26,815,482**
	2042	$ 24,914,473	3,124,970				$ **28,039,443**



25 Yrs Cummulative
$ 606,057,940

30 Yrs Cummulative
$ 766,784,313

From: Muchmore, Dennis (GOV)
Sent: Tuesday, August 25, 2015 4:53 PM
To: Wurfel, Brad (DEQ); Hollins, Harvey (GOV)
Cc: Murray, David (GOV); Wurfel, Sara (GOV); Brown, Jessica (GOV)
Subject: RE: LeeAnn Walters Draft

Nicely done.

From: Wurfel, Brad (DEQ)
Sent: Monday, August 24, 2015 1:27 PM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Cc: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>
Subject: FW: LeeAnn Walters Draft

Just a heads up, our Drinking Water Staff closing the loop with one of the participants from the meeting with the Flint Ministers regarding water quality issues in Flint. Some very worthwhile information here, and a heads up to everyone that this letter will be going to this individual.
Let me know if you have further questions, concerns, or other issues. Thanks!
b

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 10:37 AM
To: Wurfel, Brad (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

Brad – below is our draft response to Ms. Walters in followup to our meeting at the Governor's Office. Thought you might like to review the draft before we send it out. Also, is there anyone else that should see this before it is sent?

Dear Ms. Walters,

I wanted to update you regarding our Department's findings related to questions raised during our meeting at the Governor's office on August 4. I apologize for the delay in getting back to you.

Lead and Copper Monitoring

Regarding Flint lead and copper compliance monitoring for the January – June 2015 period, the City has confirmed that all lead and copper samples collected throughout the City, whether routine sites or customer requests, were sent to the State of Michigan lab for analysis. Individual sample results are provided to the property owner within 30 days of receiving the lab results in accordance with the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 410(5). Results from the State of Michigan lab are provided directly to our Office.

Staff have confirmed that the lead 90th percentile compliance calculation of 11 parts per billion is based on 69 samples that met the appropriate sampling location site criteria, and met the sample collection site and collection protocol requirements of the Safe Drinking Water Act for this monitoring period. A minimum of 60 samples were required for this monitoring period. As indicated during the meeting, the City's sampling for lead complies with the Action Level

standard of 15 parts per billion, but based on the population served by the City and these results, the City will need to make a recommendation to the MDEQ on how they will fully optimize their corrosion control treatment. These next steps continue to follow the requirements of the Lead and Copper Rule.

Samples collected at your residence of 212 Browning Avenue were not included this compliance determination as you utilize a whole home filter. As stated in the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 710a, Lead and Copper in tap water; monitoring requirements) "Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants." Such treatment alters the water chemistry and water quality such that it is no longer representative of public water from the City's distribution system. Therefore, the City cannot use samples collected at your residence as part of its determination for public water system compliance with the lead or copper action level standard.

Sample Summary (samples taken at your residence)

For your information, we are providing the information that we've gathered regarding samples collected at your home. Our records indicate between February and June of this year there were six samples collected by either you or Mr. Mike Glasgow with the City of Flint, and submitted to the State Laboratory for analysis as follows:

February 11, Bathroom tap, collected at 10:20 AM by Mike Glasgow. This sample was analyzed for aesthetic metals (copper, iron, manganese, and zinc) which does not include lead analysis.

February 18, Kitchen tap, collected at 7:15 AM by you. This sample was analyzed for lead (104 parts per billion) and copper (non-detect).

February 25, Kitchen tap, collected at 10:26 AM by Mike Glasgow. This sample was analyzed for metals including lead. All results (including lead) were non-detect except for Barium 0.01 parts per million. The result for Barium was well below its maximum contaminant level of 2 parts per million.

March 3, Kitchen tap, collected at 6:00 AM by you. This sample was analyzed for lead (397 parts per billion) and copper (non-detect).

March 18, Kitchen tap, collected at 11:10 AM by Mike Glasgow. This sample was analyzed for lead (4 parts per billion) and copper (non-detect).

April 2, Pre-point of service, collected at 8:00 AM by you. This sample was analyzed for lead (707 parts per billion) and copper (110 parts per billion).

Lead Education/Outreach

As we discussed during the meeting, we support efforts to educate homeowners about the sources of lead in their private residence, provide guidance measures to reduce the potential for lead exposure, and provide information on resources for lead abatement. Along those lines, our Office has been in contact with the Department of Health and Human Services, Environmental Health Division, Healthy Homes Section and had some preliminary discussions about a public education and assistance campaign regarding household lead issues, guidance and abatement.

Lead monitoring by public water systems serves a dual purpose. The first purpose is to ensure the public water supply is adequately treating its water to address corrosion potential and help limit lead exposure. The second purpose is to inform homeowners about lead levels within their individual residence so that they can make educated choices regarding their own exposure risk.

pH Results

During the meeting concerns were also expressed regarding pH levels within customer plumbing systems. As you may know, pH has no associated contaminant level as it is simply a numeric scale used to specify the acidity or alkalinity of a solution. The City of Flint conducts daily monitoring of pH values on both its raw and finished (treated) water at the City's water treatment plant as part of its operations. The City is also required to conduct water quality parameter monitoring in the distribution system, which includes pH. Samples are analyzed in accordance with Standard Methods using properly calibrated analytical equipment. Results for pH from these samples are summarized below.

Since late April 2014 – June 2015, the following pH conditions were reported:

Water Treatment Plant – Finished Water plant tap pH range = 7.07 minimum to 9.9 maximum, overall average 7.7, measured daily. We believe the 9.9 is a one- time anomaly from softening treatment.

Distribution System – Water Quality Parameters taken from 25 sample sites located throughout and monitored quarterly
July – Sept. 2014: pH 7.71 average, range 7.56 – 7.86
Oct. – Dec. 2014: pH 7.88 average, range 7.62 – 8.10
Jan. – March 2015: pH 7.81 average, range 7.60 – 7.99
April – June 2015: pH 7.63 Average, range 7.48 – 7.80

In addition, the City's treated water contains alkalinity, which is a measurement of the buffering capacity of water to resist a change in pH. As you can see from the water quality parameter monitoring results above there has been very little change in pH within the City's distribution system. The pH levels described within customer site piping or premise plumbing systems are believed to be the result of onsite treatment and not representative of water quality shown to be occuring in the public water supply system.

Consumer Confidence Report

Finally, there was confusion during the meeting regarding the City's annual water quality report, the Consumer Confidence Report which we have since been able to clarify.

The City of Flint issued two separate Consumer Confidence Reports (CCR's) in 2015 covering the water quality data from 2014. One report was for the period of January – April 2014 when the City was obtaining water from Detroit (DWSD). And a second report was for the period April – December 2014 when the City was using the Flint River and its own Water Treatment Plant.

The CCR for DWSD water was mailed to customers in June. The Flint River based CCR was mailed to customers in mid-July, delayed due to issues with the printing contractor. We agree that having two separate reports caused confusion. We are working with the City to ensure both reports are posted to the City's website and both are made available when requested by customers. Should the City choose to create separate CCR's during the year that the City of Flint connects to the Karegnondi Water Authority we will work with the City to provide more clarity and try to have all material included in a single mailing.

The DWSD based CCR is the one community members had at the meeting, while the DEQ brought a copy of the Flint River based CCR. As separate and distinct sampling was done under each source, this explains the discrepancy in the values and monitoring periods being reported in the respective CCR's.

We appreciate your interest in these matters and hope this has addressed many of the questions brought up during our meeting. I would like to provide this information to both Dr. Sullivan and Ms. Mayes, but I do not have their contact information. I'm hoping you can share this with them and any others that may be interested.

Sincerely,

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 08, 2015 3:00 PM
To: Wurfel, Brad (DEQ); Murray, David (GOV); Brown, Jessica (GOV); Wurfel, Sara (GOV)
Subject: RE: flint water

Respond in kind...

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 8, 2015 2:24 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: FW: flint water

Mr. Edwards with Virginia Tech posted some pretty irresponsible stuff on his site today. The Flint Journal asked for our perspective.

We were holding off last week. That has officially ended.

Let me know if you have questions or concerns. Thanks!
b.

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 08, 2015 2:20 PM
To: 'Ronald Fonger'
Cc: Busch, Stephen (DEQ)
Subject: RE: flint water

Ron,

As we discussed last week, the state DEQ is just as perplexed by Edwards' results as he seems to be by the city's test results, which are done according to state and federal sampling guidelines and analyzed in certified labs.

When I said we were unsure how the Virginia Tech team got its results, that's not the same as being surprised that they got them. There are a conservatively estimated 15,000 old homes with lead plumbing in Flint alone, and this group specializes in looking for high lead problems. They pull that rabbit out of that hat everywhere they go. Nobody should be surprised when the rabbit comes out of the hat, even if they can't figure out how it is done.

It's scientifically probable a research team that specializes in looking for lead in water could have found it in Flint when the city was on its old water supply. We won't know that, because they've only just arrived in town and quickly proven the theory they set out to prove, and while the state appreciates academic participation in this discussion, offering broad, dire public health advice based on some quick testing could be seen as fanning political flames irresponsibly. Residents of Flint concerned about the health of their community don't need more of that.

As I mentioned last week, the issue here isn't Flint's water source or water plants. It's the high number of older homes with lead pipes and lead service connections. Anyone with lead plumbing in their homes should recognize there's some communication of lead from that.

The state and the EPA are working together in Flint -- have been from the start, and we are in regular communication with federal counterparts to discuss Flint water. The state's program has been in place, protecting community water supplies for more than 40 years around the state. The reason this conversation began is because we have lead and copper rules; the city met the state and federal standard, and has agreed to further optimize its system to even further reduce lead levels, but let's be clear: lead pipes means some lead in water, at some level. Folks who have concerns should get a water specialist to take a look at their home and see what they need to do to achieve peace of mind, because lead and copper are home plumbing problems that no water source can eliminate entirely.

b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Ronald Fonger [redacted]
Sent: Tuesday, September 08, 2015 11:39 AM
To: Wurfel, Brad (DEQ)
Subject: flint water

Brad:
This was posted by the Virginia Tech researchers this morning.
Since a part of it speaks directly to MDEQ's involvement in the Flint water situation, I wanted to see if we can get a comment from you for an initial story that I hope to post in about two hours.
Thanks,
http://flintwaterstudy.org/2015/09/our-sampling-of-252-low-risk-homes-demonstrates-a-high-lead-in-water-risk-flint-should-be-failing-to-meet-the-epa-lead-and-copper-rule/

Ron Fonger
MLive Media Group
Reporter

[redacted]
email [redacted]
address 540 S. Saginaw St. #101, Flint MI 48502

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 22, 2015 3:16 PM
To: Wurfel, Brad (DEQ); Murray, David (GOV); Wurfel, Sara (GOV); Wyant, Dan (DEQ)
Cc: Hollins, Harvey (GOV)
Subject: RE: DEQ Flint water docs

Should we ask one of our own Professors to comment on this article and the testing...

From: Wurfel, Brad (DEQ)
Sent: Tuesday, September 22, 2015 8:13 AM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: Fwd: DEQ Flint water docs

Some necessary info RE Flint. One is a Q&A we developed. Other is from DHHS -- spreadsheet on blood lead levels in kids.
Call me with questions. Thanks.

b

Brad Wurfel

Communications Director

Michigan Department of Environmental Quality

517-284-6713

[redacted]

From: Murray, David (GOV)
Sent: Monday, October 05, 2015 4:03 PM
To: Wurfel, Sara (GOV)
Subject: Re: Release on Flint

It was a little confusing. Maybe it's because the headline focuses on clients.

Sent from my iPad

On Oct 5, 2015, at 3:57 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Both – clients should go to DHHS office, all others should go to local Community Action Agency location – though either can go to other locations and walk out door with filter by same form/policy to ensure "no wrong door" and make as easy as possible. But they are trying to direct folks accordingly. Outlined in 2nd graph – not clear enough?
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Monday, October 05, 2015 3:52 PM
> **To:** Wurfel, Sara (GOV) <Wurfels@michigan.gov>
> **Subject:** Re: Release on Flint
>
> I'm confused after reading the release. Does this deal just with filters for the clients, or for everyone?
>
> Sent from my iPad
>
> On Oct 5, 2015, at 3:42 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:
>
> > Talked at length with Geralyn about this just now. Think is a good thing, and shows immediate follow up from action steps announced Friday. Added bonus is that it should be pretty easy for Flint clients and residents and have a "no wrong door" approach too just in case. Please see attached and below.
> >
> > This is slated for distribution at 4 p.m. Need to hear if any concerns from anyone ASAP.
> >
> > Otherwise, it's a go.
> >
> > Thanks much,
> > SW
> >
> > ---
> >
> > **From:** Lasher, Geralyn (DHHS)
> > **Sent:** Monday, October 05, 2015 3:19 PM
> > **To:** Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Priest, Chris (GOV) <PriestC1@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
> > **Cc:** Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>; Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>; Hertel, Elizabeth (DHHS) <HertelE@michigan.gov>

Subject: Release on Flint
Importance: High

Attached is the draft release we would like to issue ASAP regarding the new plan for water filter distribution in the city of Flint.

At a meeting with multiple community partners today, our local MDHHS office realized they could do distribution from the 2 Flint offices as long as the local community action agency could assist them in storing the larger quantities of filters.

Locally, the groups will be issuing a press release from the local health department discussing distribution, but we feel it is important to also send this from MDHHS.

We are happy to discuss this with Ron Fonger if you want him to be the first press call we make once we issue it.

<Flint Filters Press Release 10515.pdf>

Message

From: Muchmore, Dennis (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MUCHMORED]
Sent: 10/7/2015 7:35:12 PM
To: Pallone, Maggie (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=c77eefaa34dd466690df15c808fd1a92]; Wurfel, Sara (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Wurfels]
CC: Wurfel, Brad (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=b6f17684155b465697bd2b350f2eb914]; Tommasulo, Karen (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=6efada3b8bf04f89a494d31d2d514c55]; Wyant, Dan (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=57e17534bc6d44b990e757afc8d8799d]; Lyon, Nick (DHHS) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=82b6b2e19e0e49058d52197dd3ba59c2]; Lasher, Geralyn (DHHS) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=d7135a709f634c62b53c9dc1c48eb5ff]; Krisztian, George (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=1c4fe45fae9647e68665cfc15cce3c64]
Subject: RE: Flint water outreach list

Give me a script that you're willing to have repeated.

From: Pallone, Maggie (DEQ)
Sent: Wednesday, October 7, 2015 2:39 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Tommasulo, Karen (DEQ) <TommasuloK@michigan.gov>; Wyant, Dan (DEQ) <WyantD@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Krisztian, George (DEQ) <krisztiang@michigan.gov>
Subject: Flint water outreach list

Attached is the outreach list for announcement for tomorrow. Please note that Kildee has been assigned to Governor tonight, and Ananich tomorrow.

I was not sure who we were contacting for Local Public Health- Geralyn can you help fill in that piece?

My understanding is this the outreach for the lead in the schools, and that outside of legislators, we are not telling anyone about the DWSD deal. Are we telling all legislators about the DWSD deal, or just the leadership team?

Thanks,

Maggie

Maggie Pallone

Deputy Director

Policy and Legislative Affairs

Department of Environmental Quality

[redacted](cell)

PalloneM@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Wednesday, October 07, 2015 11:35 PM
To: Murray, David (GOV)
Cc: Wurfel, Sara (GOV); Tommasulo, Karen (DEQ)
Subject: Re: Press release with mayor, Mott quotes

Paragraph 7 -8 has some problems. Recrafting it now, will email separately.

Sent from my iPhone

On Oct 7, 2015, at 10:44 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> Good evening Governor and team,
>
> Here's the most updated version of the press release, including quotes and incorporating suggestions from Mayor Walling and the Mott Foundation friends. Please let me know if there are any other changes. Thank you for your assistance.
>
> Dave

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation, city form partnership to fund switch until KWA is ready

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water until the Karegnondi Water Authority pipeline is completed, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority through next summer, when the KWA is expected to be completed. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation has committed $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous commitment, and the dedication of all parties to come together to protect Flint families and children."

The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Flint city leaders requested the state's help to fund the reconnection and to assist with health and infrastructure issues. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

"It's heartening to know so many people are working at so many levels to bring safe, clean water back to Flint," Mott Foundation President Ridgway White said. "We believe that reconnecting the city's water supply to Lake Huron is the right and necessary thing to do, and we're glad we could help the state and the city make it happen."

"Reconnecting to Detroit is the fastest way to deliver clean, safe water to Flint and stabilize the infrastructure system," Flint Mayor Dayne Walling said. "I appreciate the state, the Mott Foundation, Detroit, and the county's participation in a solution for Flint's water problems. The health and safety of Flint's families, children and seniors is my top priority and reconnecting to Detroit is a major step that the city could not take alone given budget constraints."

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure.

Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation. At the Lippincott location only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.

Other good practices for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.

School test results released; more investigation planned

The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.

However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov

517-335-6397, office
[redacted]
Twitter:@michigandmurray

<image001.jpg>

<151008 Flint water release_V4.docx>

From: Murray, David (GOV)
Sent: Monday, October 19, 2015 4:45 PM
To: Wurfel, Brad (DEQ)
Cc: Wurfel, Sara (GOV)
Subject: Re: PRESS RELEASE: Mayor Dayne Walling Response to MDEQ's Admission of Fault in Flint's Water Emergency

I don't think we said what the mayor is saying we said.

Sent from my iPad

On Oct 19, 2015, at 4:20 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> Wow.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** Jason Lorenz <jlorenz@cityofflint.com>
> **Date:** October 19, 2015 at 4:11:25 PM EDT
> **To:** undisclosed-recipients:;
> **Subject: PRESS RELEASE: Mayor Dayne Walling Response to MDEQ's Admission of Fault in Flint's Water Emergency**
>
> **For Immediate Release**

Mayor Dayne Walling Response to MDEQ's Admission of Fault in Flint's Water Emergency

Flint, Michigan – October 19, 2015 – The following is a response from Mayor Dayne Walling regarding the MDEQ's statement admitting fault in the Flint water emergency:

Today, the Michigan Department of Environmental Quality (MDEQ) acknowledges its leading role in the decision-making that led to the contamination of Flint's drinking water. The people of Flint hear this admission and we demand that the State fully fix this problem they caused. While the State taking responsibility and the switch to Detroit water are steps in the right direction for

Flint, actions speak louder than words. Now, the Governor and the State need to provide tens of millions of dollars to fix Flint's water and infrastructure as well as to provide for the families, children and schools affected. I will continue to push for changes and advocate for our City until every drop of water is 100% safe.

The MDEQ assured Flint that the switch was being handled safely and responsibly. We relied on the information from MDEQ, and clearly that information was wrong. My heart goes out to the children and families who are affected by this issue.

This morning our local Senator Jim Ananich said the following: "We do not know whether the misapplication of federal rules was intentional or due to negligence. That's why the Legislature needs to have a robust role in any investigation, and in ensuring those responsible for Flint's water crisis are held accountable." I applaud Senator Ananich's Statement and I urge the Governor and State Officials to take the necessary steps to ensure accountability so that this never happens again to any community.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted]
jlorenz@cityofflint.com

<Mayor Response to MDEQ Statement 10.19.15.pdf>

From: Stanton, Terry A. (Treasury)
Sent: Thursday, November 19, 2015 5:39 PM
To: Wurfel, Sara (GOV); Murray, David (GOV)
Subject: Fwd: Flint water

Feel free to call me on this tonight. Please see my earlier email.

Begin forwarded message:

> **From:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
> **Date:** November 19, 2015 at 5:15:21 PM EST
> **To:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Murray, David (GOV)" <MurrayD1@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>
> **Subject: FW: Flint water**
>
> Egan is grilling Dillon. Andy doesn't want to return his call without one of you on the phone.
>
> **From:** Andy Dillon [mailto:adillon@conwaymackenzie.com]
> **Sent:** Thursday, November 19, 2015 2:04 PM
> **To:** Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>
> **Subject:** Fwd: Flint water
>
> I am not anxious to respond to him but my experience of ignoring him hasn't been very productive.
>
> He is focused in on a relevant question.
>
> **Andy Dillon**
> Conway MacKenzie Inc.
> 401 S. Old Woodward Avenue, Suite 340, Birmingham, MI 48009
> 248.952.8868 (office) | [redacted] | 248.433.3143 (fax)
> adillon@conwaymackenzie.com
>
> ---------- Forwarded message ----------
> From: **Egan, Paul** [redacted]
> Date: Thu, Nov 19, 2015 at 1:48 PM
> Subject: Flint water
> To: "ADillon@ConwayMacKenzie.com" <ADillon@conwaymackenzie.com>

Hi Andy: Why did the state and city opt to go with KWA for Flint water supply when the study you commissioned from Tucker, Young, Jackson, Tull found that going with KWA would be more costly than staying with DWSD? (Here is excerpt from p. 17):

"Based on the analysis, it is prudent to assume the KWA water supply option costs would be somewhere

between the KWA-1 and KWA-2 options. Therefore, the analysis indicates that the two DWSD options

of supplying 8 MGD on a maximum day and up to 8 MGD on average are the least cost options for Flint.

These options allow Flint to maximize the use of existing assets; the City of Flint's (the Flint WTP) and

DWSD's (the existing 72-inch main)."

How would you describe your role in the chain of decisions that led to Flint drawing its water supply from the Flint River?

The Flint City Council opted to go with the KWA on the evening of March 25, 2013. Your schedule shows you had a 5 p.m. phone conversation at 5 p.m. that day with Dennis Muchmore "regarding Flint Water Supply alternatives."

The next day, March 26, 2013, your schedule shows a 9 a.m. meeting at Treasury "regarding Flint water, a 1:30 p.m. phone call with Dan Wyant "regarding Flint/KWA," and a w p.m. meeting in Lansing with Flint Mayor Dayne Walling?

What do you recall about these conversations/meetings? Did Muchmore sign off on the switch to KWA on behalf of the governor?

Thanks, Paul Egan

Detroit Free Press

Cell [redacted]

From: Murray, David (GOV)
Sent: Friday, November 20, 2015 2:45 PM
To: Wurfel, Sara (GOV)
Subject: Both versions
Attachments: Dillon 1.docx; Dillon 2.docx

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

I am providing my comments below based on my memory of events that transpired over two years ago. I have not reviewed the reports, emails, memos relating to these events and my recollections would likely change after refreshing my memory with the relevant documents.

First, it is important to understand Flint's decision to join the KWA was a separate and distinct decision from using the Flint River. After we signed off on Flint joining the KWA, Flint was to negotiate with the DWSD regarding using their water during the construction of the KWA. If they were unable to negotiate a fair deal, I recall their back up plan was to use the Flint River. I don't recall Treasury being involved in the negotiations with DWSD or being advised that the negotiations broke down and Flint switched to the Flint River.

Treasury held two and possibly three lengthy meetings to go over the Tucker Young report with the DEQ. The DEQ didn't agree with TY's report and identified several flaws in their assumptions which TY was unable to refute. The reason for the multiple meetings was to make sure our siding with the DEQ over TY was the correct decision. The reports were dependent upon engineering/construction related issues which were not the forte of Treasury so we relied on the advice and counsel of both TY and DEQ where the appropriate expertise resided to assist us in making this decision.

TY's largest customer was the DWSD and DWSD did not like the KWA project. We didn't assume that factored into the TY findings but it was on our radar. We didn't believe the DEQ had any agenda so their conclusion together with TY's reliance on some flawed assumptions, led us to side w/ the DEQ's opinion. The flawed assumptions related as best I can recall on redundancy requirements that TY assumed the DEQ would demand which the DEQ said would not be required. Once eliminated, the TY reports findings were undermined.

I recall Treasury needed to approve the EM's decision to join the KWA (again not to approve Flint using the Flint River).

I recall we were getting a lot of pressure from County and City officials to approve Flint joining the KWA. The decision had a deadline because whether Flint joined the project affected the size of the pipe that would bring in the water and the KWA needed to know if Flint would participate to purchase the correct pipe size.

I recall advising the Governor's office of these events because my initial instincts were not to authorize Flint joining the KWA for two reasons: 1) Flint was not in a financial position to assume any financial risk re: the project; and 2) Detroit was also in financial distress and I didn't think DWSD losing approximately 5% of their revenues was a good thing for them.

Because I thought Treasury would go against local sentiment that heavily favored KWA, I thought the Governor's office should be aware of the potential political fallout.

I also wanted the Governor's office involved because I didn't think Treasury had the expertise to make this decision and as such we would need help from the DEQ and I wanted them to support the collaboration between the two departments.

I never received any pressure from the Governor's office to decide one way or the other on approving the KWA. We followed the process described above and made a decision based upon what we thought was in the best interests of Flint. The decision to support KWA was influenced by our conclusion that there was no financial risk to Flint for the project and the DEQ's

conclusion that it was more economical for Flint to join KWA (again a separate and distinct decision from using the Flint River). The fact this conclusion was what the local officials wanted was a bonus.

I don't recall specific conversations on the dates and times you referenced. I do know there were many discussions regarding this topic between Treasury, DEQ and the Governor's office and the facts and circumstances re: KWA led to a clear consensus that the state should not block Flint's desire to join the KWA.

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From: Wurfel, Sara (GOV)
Sent: Tuesday, January 20, 2015 11:57 AM
To: Murray, David (GOV)
Subject: Fwd: Mayor Walling's letter to the governor

Are you helping track this down already, Dave?

Sent from my iPhone

Begin forwarded message:

> **From:** "Fonger, Ronald" <RFONGER1@mlive.com>
> **Date:** January 20, 2015 at 10:28:22 AM EST
> **To:** "Murray, David (GOV) (MurrayD1@michigan.gov)" <MurrayD1@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
> **Subject: Mayor Walling's letter to the governor**
>
> Dave/Sara:
> Dayne Walling posted the following on his campaign Web site and I'm writing about it today.
> Can we got a comment from your office?
> Thanks,
>
> Friend,
>
> Access to clean, safe, affordable water is a basic human right.
>
> That's why I just sent Gov. Snyder my Flint Water Improvement Plan. It focuses on the areas of safety, quality, access, investment and education. My letter urges the governor to quickly implement these ideas so that Flint's water is 100% safe.
>
> Please contact Gov. Snyder by calling (517) 335-6397 (or by clicking here) and ask him to take action immediately to implement my plan and ensure Flint's water is safe.
>
> My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the state and federal levels. Here is my plan:
>
> **Safety & Quality**
>
> - 100% Safety is the standard
> - City of Flint releases testing data to assure safety and expands testing to households with support from the Michigan Department of Environmental Quality
> - Support alternatives for those advised not to drink the water by their doctors through the Michigan Health Endowment Fund and community partners to protect the vulnerable like seniors and infants
> - Bring on experienced river water treatment operational management in the City of Flint
> - Require water testing data to be released quarterly by law in all Michigan communities
>
> **Access**
>
> - Announce an amnesty program for turn-ons and reduce the turn-on cost in Flint
> - Develop a revised payment plan policy to allow customers to come back on to the Flint system

- New Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for customers (modeled on Federal and State energy utility programs: Low Income Home Energy Assistance Program; Michigan Energy Assistance Program; State Emergency Relief)

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State Investments
- State approves City of Flint's Distressed Cities Fund applications
- Federal and State forgiveness of payment to Drinking Water Revolving Loan Fund
- Federal and State financing for future improvements
- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

- Develop a community partnership to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information on water assistance
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

The struggle with our water has gone on for too long. The state must take action and do its part.

Please ask Gov. Snyder to take action immediately to implement my plan and ensure Flint's water is safe.

Thank you for your ongoing support.

Sincerely,

Dayne

P.S. -- Please send this to friends and family so they can take action too!

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Tuesday, January 20, 2015 12:09 PM
To: Murray, David (GOV)
Subject: Re: Mayor Walling's letter to the governor

1st places to start are usually checking with Constits, treasury, and Wendy ...

Sent from my iPhone

On Jan 20, 2015, at 12:06 PM, "Murray, David (GOV)" <MurrayD1@michigan.gov> wrote:

> I am. Trying to find out how it was sent, and who it was sent to.
>
> ---
>
> **From:** Wurfel, Sara (GOV)
> **Sent:** Tuesday, January 20, 2015 11:57 AM
> **To:** Murray, David (GOV)
> **Subject:** Fwd: Mayor Walling's letter to the governor
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>
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> > **To:** "Murray, David (GOV) (MurrayD1@michigan.gov)" <MurrayD1@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
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> >
> > Dave/Sara:
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Thank you for your ongoing support.

Sincerely,

Dayne

P.S. -- Please send this to friends and family so they can take action too!

Ron Fonger
MLive Media Group
Reporter

[redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, January 26, 2015 4:13 PM
To: Murray, David (GOV)
Subject: FW: dayne walling/request for comment
Attachments: flintwater_oped_final1.docx

Have you already coordinated with Treasury/DEQ and drafted a response?

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Monday, January 26, 2015 3:54 PM
To: Wurfel, Sara (GOV)
Subject: FW: dayne walling/request for comment

Hi Sara:
I'm sorry, but I am having to turn this around quickly wanted to make sure I was able to reach someone

---

From: Fonger, Ronald
Sent: Monday, January 26, 2015 2:28 PM
To: Murray, David
Subject: dayne walling/request for comment

Dave:
I'm attaching an op-ed that Flint Mayor Dayne Walling has given MLive-The Flint Journal. I'm writing a story about his request that the governor visit Flint.
I did hear back from Terry Stanton the last time we asked for a response to the mayor's water improvement plan and I used his comments, however Walling has told me since that he's expecting a response from the governor himself and I'll probably be using that in the story I'm working on also.

Ron Fonger
MLive Media Group
Reporter
[redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

By Flint Mayor Dayne Walling

Access to safe and clean water is a basic human right. And a citizen's right to safe drinking water should not be based on how much money you earn, the neighborhood you live in or if your local government is under the control of an emergency manager.

All citizens have a fundamental right to know that such a critical resource as their water supply is safe and accessible. But that is not happening in Flint at the moment.

That is why, on January 18th, I forwarded a request that Governor Snyder adopt my Flint Water Improvement Plan. My plan, focused on the areas of safety, quality, access, investment and education, starts by calling for 100 percent safety as the standard for water.

The plan calls for reporting of water testing to the public by city officials, an amnesty program to reduce fees for Flint water turn-ons, accelerated water system capital improvements and partnerships with community organizations to help with water payment assistance. I'm also reaching out to other state and elected officials for support.

The request comes as residents, as evidenced in a series of recent community meetings, continue to have concerns about the quality of Flint's water. Earlier in 2014, several boil-the-water advisories were issued by the city because of issues with bacteria found in water in some parts of Flint. Gov. Snyder's appointed emergency manager recently told customers that Flint was in violation of the Safe Drinking Water Act because of the high level of trihalomethane (TTHM) -- a byproduct of chlorination -- in drinking water samples last year.

A contradictory order from the city saying the water was safe but could present risks for infants, the elderly and those with compromised immune systems confused residents further and compounded the worries of Flint's vulnerable populations. Marry that with costly water rates that have threatened individuals' access and you have the crisis of concern and confidence swirling in Flint today.

Sadly, because Flint is under Michigan's controversial emergency manager system of governance, locally elected officials have been largely limited to serving as sounding boards to justifiably worried Flint residents.

This is unacceptable. Not only should Governor Snyder visit Flint in the midst of this ongoing crisis, but his administration should make it the priority that the community expects.

It's time for the Snyder administration to do what is best for the citizens of Flint---immediately. There is nothing more important in Flint right now than fixing the water problems.

This will take time and money so the sooner the new investments are made, the better.

From: Wurfel, Sara (GOV)
Sent: Tuesday, January 27, 2015 7:32 AM
To: Wurfel, Brad (DEQ)
Subject: Fwd: Flint Journal and water stories

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

Begin forwarded message:

> **From:** "Murray, David (GOV)" <MurrayD1@michigan.gov>
> **Date:** January 26, 2015 at 8:42:48 PM EST
> **To:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
> **Subject: Flint Journal and water stories**
>
> Wanted to give you guys a heads up. The Journal has posted four stories about the water issue today, three of them within the hour. Based on my Mlive experience, I can tell you this means A) the stories are getting a lot of hits, and they are milking it in an attempt to B) get the stories to go viral. They no doubt remember the attention the Detroit water issue got during the summer and are shooting for something similar. Journalism has taken a backseat to clicks.
>
> I don't know if that changes what we do, but I wanted to give you a heads up to the strategy. Pushing back will give them more stories, but we might be able to shift the narrative away from the state.
>
> **Dave Murray**
> Deputy Press Secretary | Executive Office of Governor Rick Snyder
> MurrayD1@michigan.gov
> 517-335-6397, office
> [redacted]
> Twitter:@michigandmurray

From: Wurfel, Sara (GOV)
Sent: Friday, January 30, 2015 12:01 PM
To: Katie Carey
Subject: RE: Rep Neeley's Release

Thanks, Katie -- appreciate the note and heads up.

Though just making sure that you clearly do know this was something the city repeatedly pushed and asked for, that we're working collectively with the Flint community already to help address as best possible.

Thanks,
SW

From: Katie Carey [mailto:kcarey@house.mi.gov]
Sent: Friday, January 30, 2015 11:46 AM
To: Wurfel, Sara (GOV)
Subject: Rep Neeley's Release

Sara –

Just wanted to give you a heads up that Rep Neeley sent a letter to the Gov and asked that I send out the following press release re the water situation in Flint.

FOR IMMEDIATE RELEASE
Friday, Jan. 30, 2015

Contact: Rep. Sheldon Neeley
Phone: (517) 373-8808

Neeley Sends Letter to Governor Concerning Flint Water Crisis

Legislator asks Gov. Snyder to consider plans to fix water system

LANSING – State Representative **Sheldon Neeley** (D-Flint) has sent a letter to Gov. Rick Snyder, as well as his chief of staff, Dennis Muchmore, and his senior advisor, Dick Posthumus, to inform them of the current crisis affecting the city of Flint's water supply. Residents have spoken out about the quality of the water, calling it unsafe to drink. Photos taken by residents and Flint media have shown the water to be brownish in color, with sediment and other foreign bodies floating in it.

"In light of the rising and continuous concerns in the Flint community, it is imperative that the governor explores all options in his power to come to the aid of the community," Neeley said.

In the letter, Rep. Neeley asks for an executive decision by the governor to forgive Flint's water fund loan balance of nearly $20.8 million so that those funds may be used to help the city rebuild the infrastructure as well as provide a cost-effective water delivery system.

With this loan forgiveness, Rep. Neeley explains the city will be able to upgrade wastewater treatment processes, improve safe drinking water upgrades and maintain a water system that provides better water to the citizens of Flint.

"The people of Flint elected me to serve them first, and when I see my constituents on the verge of civil unrest, I must act swiftly and with passion," Neeley said. "I am hopeful this letter will bring the concerns of Flint to Gov. Snyder, and that will in turn open a dialogue about what can be done to help the community I love so much."

###

Katie Carey
Deputy Director of Democratic Central Staff
Press Secretary, House Democratic Leader Tim Greimel & the House Democratic Caucus
517.373.8924 (office)
[redacted]
kcarey@house.mi.gov

From: Wurfel, Sara (GOV)
Sent: Monday, February 09, 2015 12:33 PM
To: Wurfel, Brad (DEQ); Stanton, Terry A. (Treasury); Murray, David (GOV)
Subject: RE: Flint Water Update

Not really – still wondering if TR is working with/through the Emergency Manager OR mayor, or both?

Regardless, is a bit fishy.

From: Wurfel, Brad (DEQ)
Sent: Monday, February 09, 2015 12:17 PM
To: Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Flint Water Update

Answers the question about whether the Mayor is getting counsel from TR …
b

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Monday, February 09, 2015 12:01 PM
To: Wurfel, Brad (DEQ)
Subject: Flint Water Update

Hi, Brad – Wanted to let you know that Flint will be announcing its water consultant tomorrow at a 2 PM media roundtable. Holler if you have questions or need info. Thanks!

Kelly

Kelly Rossman-McKinney, APR
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 600 • Lansing, MI 48933
200 Renaissance Center, Suite 3160 • Detroit, MI 48243
125 Ottawa Ave NW, Suite 235 Grand Rapids, MI 49503
Office: 517-487-9320
Fax: 517-487-5080
[redacted]

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 12:05 AM
To: Wyant, Dan (DEQ); Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ); Pallone, Maggie (DEQ); Lyon, Nick (DHHS); Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS); Eisner, Jennifer (DHHS); Hertel, Elizabeth (DHHS)
Cc: Murray, David (GOV); Kennedy, Jordan (GOV); Brown, Jessica (GOV); Thelen, Mary Beth (DEQ)
Subject: Media conference call re: Flint water action plan
Attachments: NR 151002 - Flint water action plan.docx; Infographic - Flint Water Action Plan 10-2-15.pdf; Infographic - Flint water tips 10-2-15.pdf; Flint water - talking points (draft 151001).docx

Importance: High

Hi all –

Per conversations today, here are the details for Friday's embargoed media conference call.

Given some of the changing information, we added in a quick pre-brief with the Governor from 11 to 11:10 a.m. to give us a chance to go over any last details and finalize flow. This will be followed by the actual media conf. call from 11:15 to 11:40 a.m. Know that folks will be needing to head to Flint immediately afterward.

Sounds like we'll have Dan, Nick and Dr. Wells in person. That's great and will work best when most everyone is in the same room. The location is Romney Building, 1st floor communications conference room. The governor will be joining us from phone.

We'll need to be fairly quick in overview and framing comments so we can get to as many Qs as possible.

Please let me know if anyone has any Qs, concerns or needs anything else at all. Or if you'd like a listen only line for anyone back in the depts. to catch the call.

Otherwise, see you in the Romney by 11 a.m. tomorrow.

Thanks so much!
SW

p.s. Also attached key documents as stand right now – release, 2 infographics and the high level points.

Agenda:

11:15-11:16 AM	SW intro; sets parameters; introduces other participants; turns over to Governor for opening remarks
11:16-11:20 AM	Governor gives opening remarks; highlights reason for state action; introduces Director Wyant
11:20-11:24 AM	Director Wyant remarks; highlights key steps in the action plan; introduces Director Lyon
11:24-11:27 AM	Director Lyon remarks; highlights key health components of the plan and mentions Dr. Wells; turns back to Governor
11:27-11:37 AM	Governor opens it up for Q&A
11:37-11:39 AM	Governor closing remarks
11:39-11:40 AM	SW wraps up call; reminds reporters of embargo, 1:30 p.m. press conference, and how to get a hold of everyone

Possible Topics:
Flint water action plan

Lead in Flint water
Handling of Flint water issue
Genesee Co. health emergency action
ACLU action
Hurley data
Reconnecting Flint to Detroit water

Media invited:
Flint area media (print, TV and radio) – Flint Journal/Ron Fonger; WJRT TV 12, WNEM TV 5, WEYI TV 25, WFNT Radio
Associated Press – Ed White
Detroit News – Jim Lynch
Detroit Free Press – Nancy Kaffer, Kristi Tanner & Kathy Gray
Michigan Radio – Steve Carmody

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray Governor's Office: 517-335-6397 Brad Wurfel, 517-284-6713 or Karen Tommasulo, 517-284-6714 Department of Environmental Quality Jennifer Eisner, 517-230-9804 Department of Health and Human Services	Friday, Oct. 2, 2015

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or service connections could experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Departments of Environmental Quality (DEQ) and Health and Human Services (DHHS), the U.S. Environmental Protection Agency, and the city of Flint.

"We are focused on helping ensure safe, clean, accessible drinking water and addressing and mitigating concerns and protecting public health," Snyder said. "Today's action plan builds upon ongoing work with local, state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents have accurate information and know that help is available to address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Providing free water filters to residents with concerns or who are included in state assistance programs.
- Expanding health exposure testing of individual homes.

- Accelerating corrosion controls in the Flint drinking water system.
- Accelerating water system improvements to address replacing lead service lines.
- Expediting the completion of the Karegnondi Water Authority pipeline.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Boosting a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. The DEQ is covering the cost of this testing.

State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with free water filters and inform families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

Additional information is available at www.michigan.gov/flintwater.

###

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Providing free water filters** to residents with concerns or who are included in state assistance programs.
- **Expanding health exposure testing** of individual homes.
- **Accelerating corrosion controls** in the Flint drinking water system.
- **Accelerating water system improvements** to address replacing lead service lines.
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- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- Boosting a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email fliniwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

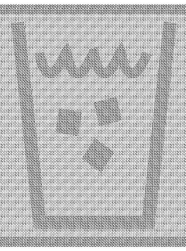
TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and **anyone in the state with lead pipes in their home can take some extra precautions** to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.

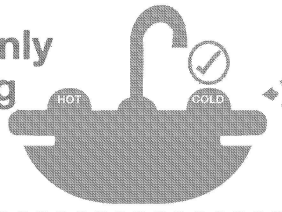


2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can minimize your exposure.

- To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
- In the city of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit **www.mi.gov/FlintWater** for more information

Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
    - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
    - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
    - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
    - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
    - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
    - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
    - We encourage anyone with a concern to get their water tested.
    - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**

- A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
- This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
- If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
  - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
  - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
  - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
  - This is a problem in communities statewide, and one we want to address with a long-term solution.
  - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
  - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
  - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
  -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
  - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.

- She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
- Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
  - As an additional precaution, water filters will be available to low-income families.
  - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
  - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
  - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.
    - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
    - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
  - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 11:53 AM
To: Pallone, Maggie (DEQ); Wyant, Dan (DEQ); Tommasulo, Karen (DEQ); Wurfel, Brad (DEQ)
Subject: Fwd: Embargoed media conf. call - Flint water action plan

Answer is yes - but what was total number of traditional and charter public schools again?

Sent from my iPhone

Begin forwarded message:

> **From:** "Livengood, Chad" <CLivengood@detroitnews.com>
> **Date:** October 2, 2015 at 11:47:46 AM EDT
> **To:** "Wurfel, Sara (GOV)" <WurfelS@michigan.gov>, "Murray, David (GOV)" <MurrayD1@michigan.gov>
> **Cc:** "Lynch, James" <JLynch@detroitnews.com>
> **Subject: RE: Embargoed media conf. call - Flint water action plan**
>
> Sara or Dave,
>
> Quick follow-up question: In reference to the plan to immediately test water coming out of the faucets of all schools in Flint Community Schools, will the water at Flint's public charter schools be tested as well? I don't have an exact count, but I'm guessing there are a half-dozen or more charter schools in Flint.
>
> -Chad
>
> ---
> Chad Livengood
> Capitol Reporter
> The Detroit News
> Lansing bureau: (517) 371-3660
> Cell: [redacted]
> clivengood@detroitnews.com
> Twitter.com/ChadLivengood
>
> ---
>
> **From:** Wurfel, Sara (GOV) [mailto:WurfelS@michigan.gov]
> **Sent:** Friday, October 02, 2015 9:48 AM
> **To:** Lynch, James <JLynch@detroitnews.com>; Livengood, Chad <CLivengood@detroitnews.com>
> **Subject:** Embargoed media conf. call - Flint water action plan
> **Importance:** High
>
> Hi there Jim and Chad –
>
> Per earlier conversations, below is information for a media conference call with Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of

Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.

They will also be available to answer Qs.

As agreed by you and your team, this information is fully embargoed until when the 1:30 p.m. press conference later today in Flint begins.

SPECIFIC CALL-IN DETAILS:
Topic: Flint water action plan
Date: Friday, Oct. 2
Time: 11:15 a.m.
Conference Line call-in number: [redacted]
Conference line passcode: [redacted]
** To ask a question during that portion of the call, please press "0." (but please refrain from pressing zero until opening remarks are completed to help ensure you don't miss any of the details).

****NOTE**:** This invitation is for planning purposes only and meant for you and/or your outlet as there are a limited number of participant lines. Please let us know if you wish to have someone else participate so we can work to accommodate.

Please let us know if who from Detroit News plans to participate or if you need anything else at all in interim.

Thanks so much,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 12:31 PM
To: Pallone, Maggie (DEQ); Wyant, Dan (DEQ); Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ)
Subject: Fwd: Follow-up questions

Sent from my iPhone

Begin forwarded message:

From: "Kaffer, Nancy" <nkaffer@freepress.com>
Date: October 2, 2015 at 12:05:53 PM EDT
To: "Wurfel, Sara (GOV)" <WurfelS@michigan.gov>
Subject: Follow-up questions

- Reviewing my notes, I'm not sure I got a definitive answer from Wyant about corrosion control at the Flint water treatment plant.
  Was corrosion control in use? I'd like a simple yes or no, here – if no, obviously, why not – if yes, what was it, and why was – if any – what sounds like a lesser degree of corrosion control being used? I would like the names of the specific technologies/chemicals that were in use in the past, if in fact corrosion control was being used at the Flint plant, and the specific technologies that will be used going forward.
- Was the MDEQ unaware that there were aging lead service lines in Flint, and that those would increase the lead risk? Were the Flint water treatment folks? Why was this not taken into account in developing the water treatment count?
- Wyant said that "two consecutive back to back tests" showed there was a problem; when were those tests performed and when were the results available?

Obviously I would like to use this information in a piece we'll have ready to go at 1:30p so ASAP would be great.

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
[redacted]
@nancykaffer, @abettermi

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:11 AM
To: Emmitt, Beth (GOV); Murray, David (GOV); Agen, Jarrod (GOV)
Subject: RE: Flint

Agreed overall, though ideally it would have been a week or two ago before the fever pitch level it is now. But we need to do something more to change the narrative and demontrate state's leadership and determination to help tackle the issue.

Key challenge is what specifically tied to kind of venue/announcement/info given the dynamics and timing (ie. school testing results) and status of DWSD reconnect conversation. Or a way to convey some other tangible item/assistance.

These filter distribution sites announced yesterday and that Beth highlighted below could be good one - it's a state led effort with collaboration - just would have to be done carefully.

We also have the state lab where testing is done. Though that poses certain opportunities and risks too, including it's not in Flint (is in Lansing).

-----Original Message-----
From: Emmitt, Beth (GOV)
Sent: Tuesday, October 06, 2015 10:55 AM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Cc: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Flint

http://www.mlive.com/news/flint/index.ssf/2015/10/whats_next_for_water_filter_di.html

This Friday afternoon he could visit one of the sites, talk to the CEO of United Way.

-----Original Message-----
From: Murray, David (GOV)
Sent: Tuesday, October 06, 2015 10:53 AM
To: Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Cc: Emmitt, Beth (GOV) <emmittb@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Re: Flint

I think this is a good idea. One think we keep hearing is that the governor is not involved or is detached. The Mike Thompson cartoon in the Freep last week is getting a lot of mileage on social media.

This would be good to show he's there and cares. And if we don't announce until he's there we can avoid the protests -- and still get the optics.

Sent from my iPhone

> On Oct 6, 2015, at 10:49 AM, Agen, Jarrod (GOV) <AgenJ@michigan.gov> wrote:

>
> Don't forward or spread this around, but give me your take.
> I think we may need to get G into Flint this week.
> Unpublicized, but public. Filter distribution, testing visit, discussion with Superintendent, etc...
> (And probably again next week.)
>
> We should at least present the option of what a potential visit would look like.
>
> Can you think about it and let me know how we'd do it.
> I know it would require blowing up a day or part of a day.
>
>

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 1:31 PM
To: Snyder, Rick (GOV)
Subject: FW: KWA

Both Dan and Andy believe that the discussions held in the past with DWSD and Flint have been contentious and not fruitful. What we are going to do is tell Flint that if they believe it is in Flint's interest they should sign and submit to Andy for his approval. Brom will tell them that. At the same time we will inform DWSD that this is happening and if they want to make a last attempt they should do so during the period of time that Andy is deliberating on his counter signature. Dan does not believe that DWSD has been straight and doesn't think they will offer anything and Andy concurs. Under any circumstances Flint will have to deal with DWSD on the present delivery system and that may create some negotiations but it's doubtful they will be significant.

We will encourage DWSD to make an attempt. We did call them together as recently as November to negotiate and those discussions were not successful. Andy and Dan will make one last effort.

-----Original Message-----
From: Dillon, Andy (Treasury)
Sent: Thursday, March 28, 2013 6:18 PM
To: Snyder, Rick (GOV); Muchmore, Dennis (GOV); Roberts, John (GOV); Wyant, Dan (DEQ)
Cc: Stibitz, Brom (Treasury); Fraser, Roger (Treasury); Saxton, Thomas (Treasury)
Subject: KWA

Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.

We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.

I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.

Regards,

Andy

Sent from my iPad

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 14, 2014 3:52 PM
To: Saxton, Tom (SaxtonT@michigan.gov); Workman, Wayne (TREASURY)
Subject: FW: Flint water

Can you guys step into this?

From: Gadola, Michael (GOV)
Sent: Tuesday, October 14, 2014 3:42 PM
To: Brader, Valerie (GOV); Muchmore, Dennis (GOV); Agen, Jarrod (GOV); Clement, Elizabeth (GOV)
Subject: RE: Flint water

Good gravy. First, just to clarify, when Valerie says GM is leaving, she means leaving the Flint water system, not abandoning the City altogether.

Second, to anyone who grew up in Flint as I did, the notion that I would be getting my drinking water from the Flint River is downright scary. Too bad the EM didn't ask me what I thought, though I'm sure he heard it from plenty of others. My Mom is a City resident. Nice to know she's drinking water with elevated chlorine levels and fecal coliform.

I agree with Valerie. They should try to get back on the Detroit system as a stopgap ASAP before this thing gets too far out of control.

From: Brader, Valerie (GOV)
Sent: Tuesday, October 14, 2014 3:30 PM
To: Muchmore, Dennis (GOV); Gadola, Michael (GOV); Agen, Jarrod (GOV); Clement, Elizabeth (GOV)
Subject: Flint water

As you know there have been problems with the Flint water quality since they left the DWSD system, which was a decision by the emergency manager there. Specifically, there has been a boil water order due to bacterial contamination. What is not yet broadly known is that attempts to fix that have led to some levels of chlorine-related chemicals that can cause long-term damage if not remedied (though we believe they will remedy them before any damage would occur in the population). Now apparently the reduced quality is causing GM to leave due to rusted parts.

I am fairly sure that GM's departure now means the economic rationale for Flint leaving DWSD in the interim while the new intake is constructed has just been eliminated. Moreover, our DEQ has been working with Flint's team to try to address the technical problem, but doing a blend of DWSD water and Flint water, or going back altogether for a year or two while the new lake intake is constructed, have not really been solutions on the table.

Now we are getting comments about being lab rats in the media, which are going to be exacerbated when it comes out that after the boil water order, there were chemicals in the water that exceeded health-based water quality standards. I think we should ask the EM to consider coming back to the Detroit system in full or in part as an interim solution to both the quality, and now the financial, problems that the current solution is causing. That additional revenue would also help DWSD, obviously, and the infrastructure is already in place, so this could be implemented quickly. I am not sure who is the best person to initiate that conversation with the EM, but I see this as an urgent matter to fix.

--Valerie

P.S. Note:I have not copied DEQ on this message for FOIA reasons. I have sent them the below message from the Senator's office and had conversations with them re making sure to brief the EM directly on the water quality issues.

From: Bryanna McGarry [BMcGarry@senate.michigan.gov]
Sent: Tuesday, October 14, 2014 12:45 PM
To: Brader, Valerie (GOV)
Cc: Tom Lenard (tomlenard@jimananich.com); Sean Walser; [redacted]
Subject: GM's decision to stop using Flint River water will cost Flint $400,000 per year

Hi Valerie,

Hope you're doing well. Senator Ananich asked me to forward you this article about GM's decision to stop using Flint River water: http://www.mlive.com/news/flint/index.ssf/2014/10/gms_decision_to_stop_using_fli.html. He mentioned he'd had a conversation with you about Flint's water issues and just wanted to ensure you saw the latest.

Thanks! Have a wonderful afternoon. :)

Best,

Bryanna

--
Bryanna McGarry, MSW
Legislative Director
State Senator Jim Ananich
District 27
517-373-5133

Subject: Conf Call re Flint Water
Location: [redacted]

Start: Thu 9/24/2015 3:30 PM
End: Thu 9/24/2015 4:00 PM

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Muchmore, Dennis (GOV)
Required Attendees: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Clement, Elizabeth (GOV); Clayton, Stacie (GOV); Baird, Richard (GOV); VanSickle, Michele (GOV); Murray, David (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Lasher, Geralyn (DCH); Grijalva, Nancy (DCH); Saxton, Thomas (Treasury); Pleyte, Beth (Treasury); Walsh, John (GOV); Hall, Jean (GOV); Mcbride, Bill (GOV)
Optional Attendees: Busch, Stephen (DEQ); Brown, Eric (GOV); Hertel, Elizabeth (DCH); Wurfel, Sara (GOV)

[redacted]
[redacted]– Harvey to host

From: Hollins, Harvey (GOV)
Sent: Wednesday, July 22, 2015 4:50 PM
To: Muchmore, Dennis (GOV)
Subject: '20150722_Meeting with Flint's Clean Water Coalition'
Attachments: 20150722_Meeting with Flint's Clean Water Coalition.docx; ATT00001.htm

Chief,
Just got a call from Wendy re the notes from the Flint meeting. I took a picture of your notes and sent them to you via text. Attached is a copy of my notes.

20150722_Meeting with Flint's Clean Water Coalition
Attendees: Rev. Wallace Hill, Rev. Allen Overton, Melissa May, Claire McClinton and Dr. Laura Sutherland (professor of Chemical Engineering at Kettering)

NOTES:

- Issue is not rust, but TTHM and lead
  - ✓ Rust…not an issue
  - ✓ TTHM should be taken care by the granular filter currently being installed
  - ✓ Lead is the issue
    - No one from the group has contacted the city
    - Lead is too small to filter
- Excess levels of chlorine increases the PH levels execrating metallic decomposition of iron, copper and lead
- KWA Pipeline
- RTAB's activity
- County Health Department have asked the city for information city not forth coming

TODO:

- Water Rates---Treasury
  - ✓ Rate structure
  - ✓ High flushing activity and rates…should result in a discount
  - ✓ How are the current rate calculated
  - ✓ RTBA reversal of the city's decision to tax the DDA.
- Lead—DHHS and DEQ
  - ✓ Dennis Muchmore will follow up with DHHS to check on the lead content in Flint water.
  - ✓ Follow up with DEQ
    - DEQ has results of testing water
  - ✓ Pastor Overton will send a complaint to the city
- KWA Pipeline:
  - ✓ Governance of KWA
  - ✓ Who paying for the buildout
  - ✓ Will the KWA water be mixed with the Flint River water

Best,
Harvey Hollins III, Director
Governor's Office of Urban Initiatives

313.456.4994 (office)
[redacted] (Cell)

From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 4:18 PM
To: Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Wyant, Dan (DEQ)
Subject: FW: Need upate on lead / copper tests for Flint
Attachments: DWSD-CorrosionControlStudy.pdf; Flint lead history.pdf; DWSD-Flint-1993-Lead-Letter.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Guys, here's an update and some clarification on the lead situation in Flint. Please limit this information to internal for now.

By the tenants of the federal statute, the city is in compliance for lead and copper. That aside, they have not optimized their water treatment (for the most part, this means adding phosphates to minimize the degree that the water Ph mobilizes lead and copper in people's home plumbing).

Compliance with the standard started with testing. A June-December run of tests (all in homes with lead in their premise plumbing) concluded in December. Another January – June round of sampling concluded last month. Everything checks out in terms of compliance, but now the next step is optimizing the water supply.

So, In about two weeks, DEQ will be sending a formal communication about the optimizing issue. The federal program has long timelines for action. A community water supplier gets 18 months to study the options, and two years thereafter to implement water system optimization measures.

My point: Conceivably, by the time we're halfway through the first timeline, the city will begin using a new water source with KWA … and conceivably, the whole process starts all over again.

In terms of near-future issues, the bottom line is that residents of Flint do not need to worry about lead in their water supply, and DEQ's recent sampling does not indicate an eminent health threat from lead or copper. That said, anyone with lead pipes in their premise plumbing (this translates to tens of thousands of homes in our older urban centers, btw) should at least be aware that they have them, and to some limited degree that's going to impart minute parts per billion of lead in water no matter what. Its why nobody uses lead water pipes anymore.

The long version of this note is below. Let's connect next week. I'd like some thoughts about what more the state could be doing – most immediately, to convey the results of our testing and tell the story to the residents of Flint in an effort to quell some fears.
Thanks!
b

From: Busch, Stephen (DEQ)
Sent: Friday, July 24, 2015 3:46 PM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: Need upate on lead / copper tests for Flint

Brad,

As we discussed, the City has completed the last round of monitoring (Jan 1 – June 30, 2015). The last samples came in about a week ago. We have made the compliance determination that the 90th percentile level is 11 parts per billion, which is below the Action Level Standard of 15 parts per billion (there is no Lead maximum contaminant level standard). The federal rule requires measuring lead levels in water from household plumbing materials to determine the corrosivity of the City's water in order to limit exposure.

I have provided a summary of Flint's lead compliance monitoring from the last 20+ years since this regulation started in 1991. The City of Flint itself has never had a 90th percentile level exceed the 15 part per billion action level. Sampling requirements look at the worst case plumbing materials. Samples must be collected in accordance with the regulatory requirements and criteria in order to be used for compliance determinations.

Because the City of Flint serves a population of over 50,000 they are required to have Fully Optimized Corrosion Control. While it is possible to meet the fully optimized requirement without additional treatment, based on their two rounds of sampling since switching to the Flint River, we have determined they did not meet the eligibility for this per the regulation. They now have to complete a study (within 18 months) and are then allowed a period of additional time (2 additional years) to install the selected treatment for Fully Optimized Corrosion Control in accordance with the regulatory requirements. This is what DWSD was required to do back in 1993 – 1997 (see attached letter and study). We are planning to suggest the City directly submit a treatment process to shorten the timeline to achieve full optimization. This letter is currently being drafted but won't be ready to mail out for another week.

Liane and I had a conference call with EPA region V in Chicago on Tuesday to go over all of this and they are in support of these next steps with the City.

The matter will be potentially further complicated when the City switches over to water from the Karegnondi Water Authority next year to re-evaluate the continuing requirement to fully optimize corrosion control.

The DEQ recognizes that there is has been no level of lead exposure determined to be safe, but again the regulation was developed to optimize water corrosivity to limit exposure and the City is following the regulatory requirements.

Lead is not coming from the Flint River or the City's Water Treatment Plant or the public distribution system. It is from lead service lines into homes and from plumbing materials and fixtures within the private property of the household.

As watermains are replaced within the City lead services associated with that section of watermain would be replaced in order to reconnect to City water. This would also place burden on the homeowner to pay for having the service line re-plumbed. However, since 2000 only 16 miles of the City's 500 miles of watermain have been replaced as they did not have the financial means to do so.

Let us know if there are questions or you need any additional information.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 12:09 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ)
Subject: Need upate on lead / copper tests for Flint

Guys, the Flint Ministers met with the Governor's office again last week. They also brought along some folks from the community – a college prof and a GM engineer – who imparted that 80 water tests in Flint have shown high lead levels.

Could use an upate on the January / june testing results, as well as recap of the December testing numbers, and any overview you can offer to edify this conversation.
Call me or email today if possible. Thanks!
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted] cell

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
WATER BOARD BUILDING

735 RANDOLPH STREET
DETROIT, MICHIGAN 48226-2830
PHONE 313 • 224 • 4800/224•4801
FAX 313 • 224 • 6067

June 10, 1994

To: DWSD Wholesale Customers

RE: EXECUTIVE SUMMARY OF DETROIT'S CORROSION CONTROL STUDY

Enclosed is a copy of the Executive Summary prepared by our consultant, Tucker, Young, Jackson & Hull, detailing work to date on the Corrosion Control Study performed for Detroit and Detroit's wholesale customers.

The EPA required large utilities to test water samples in highest risk homes for led and copper content in 1992 to determine if the action levels of 15 micrograms per liter and 1.3 milligrams per liter respectively were exceeded. Detroit complied with this requirement and determined that the action level for lead was exceeded in many communities. Therefore, DWSD conducted and continues to conduct a public education program designed to inform consumers how to reduce their exposure to lead.

The EPA further required large water suppliers to determine if their lead could be less corrosive and, if so, the utility was mandated by the Lead and Copper Rule to determine ways the water could be made less corrosive and report their recommendations to the primary agency. For DWSD, the primary agency is the Michigan Department of Public Health (MDPH).

After several years of study, DWSD is forwarding the complete study findings to the MDPH for their consideration. It was concluded that DWSD could reduce the corrosivity of the water in the most cost effective and efficient manner by the addition of ortho-phosphate, specifically in the form of phosphoric acid. The Executive Summary of these findings is being forwarded to you for your information. The MDPH has until the end of December 1994 to consider DWSD's recommendation. In the interim, DWSD plans on conducting a demonstration test of the corrosion control treatment in our distribution system to further assist the MDPH and to further safeguard public health.

Very truly yours,

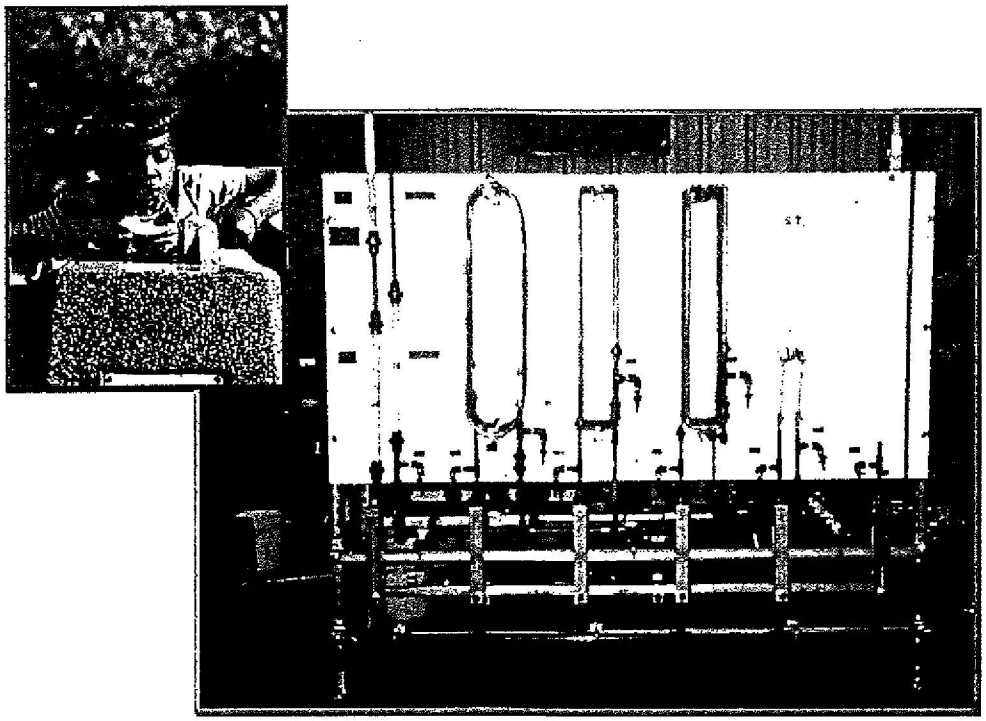
Irving M. Schuraytz, P.E.
Assistant Director, Water Supply Operations

Kathleen Leavey
Deputy Director

KL/IMS/JH/cs

Executive Summary

Lead and Copper Corrosion Control Optimization Study



prepared by

Tucker, Young, Jackson, Tull, Inc., in association with
CH2M HILL, INC., and Economic and Engineering Services, Inc.

May 1994

Detroit Water and Sewerage Department

Introduction

As a result of the Safe Drinking Water Act (SDWA) Amendments of 1986, the U.S. Environmental Protection Agency (EPA) published final drinking water regulations for lead and copper in the June 7, 1991, *Federal Register*. Those regulations, known as the Lead and Copper Rule (LCR), require:

- Tap water monitoring, which is a new approach for water utilities
- Treatment optimization for lead and copper corrosion control
- Public education and lead service line removal if utilities exceed preset lead or copper levels

Large utilities, serving populations greater than 50,000, are required to conduct corrosion control studies to demonstrate that they are either already providing optimal treatment or to determine optimal treatment for their system.

DWSD made necessary public notices and embarked on studies to develop optimal treatment solutions.

In response to the regulations, the Detroit Water and Sewerage Department (DWSD) conducted two rounds of monitoring at home water taps for lead and copper and throughout the distribution systems for other water quality parameters. Monitoring was a cooperative effort between the DWSD, wholesale water customers, and the Michigan Department of Public Health (MDPH). Copper levels were well below EPA limits. Lead levels, however, exceeded EPA action levels (ALs) and DWSD made necessary public notices and embarked on studies to develop optimal treatment solutions.

Lead exposure sources for humans include air, food, dust, paint, and drinking water. Elevated lead levels in blood have been associated with adverse health effects in humans. Federal health authorities have many programs to reduce lead exposure including low-lead gasoline and reduced lead content in paint. Although drinking water may not be the major source of lead, reducing lead levels in drinking water will have a positive health benefit. An additional benefit of corrosion control is prolonged life for water distribution pipes and home plumbing. This results in lower costs for water utilities and their customers.

In March 1992, the DWSD contracted with Tucker, Young, Jackson, Tull, Inc. (TYJT), in association with CH2M HILL, INC., and Economic and Engineering Services, Inc. (EES), to perform a lead and copper corrosion control study. The purpose of the study was to determine the optimal approach for reducing lead and copper concentrations in DWSD drinking water without adversely affecting other water quality characteristics. Major tasks in this study were to:

- Evaluate existing water quality data, existing distribution system pipe materials and the results of lead and copper sampling
- Identify and analyze feasible and practical treatment methods to reduce lead and copper corrosion (desktop analysis)
- Design and construct a pipe-loop testing apparatus to evaluate treatment alternatives identified in the desktop analysis

- Operate the pipe loops for 1 year to evaluate selected corrosion control treatments on different pipe materials
- Evaluate the effectiveness and feasibility of the tested treatment alternatives in reducing lead and copper concentrations
- Recommend an optimum lead corrosion control treatment
- Develop an implementation plan for full-scale corrosion control facilities

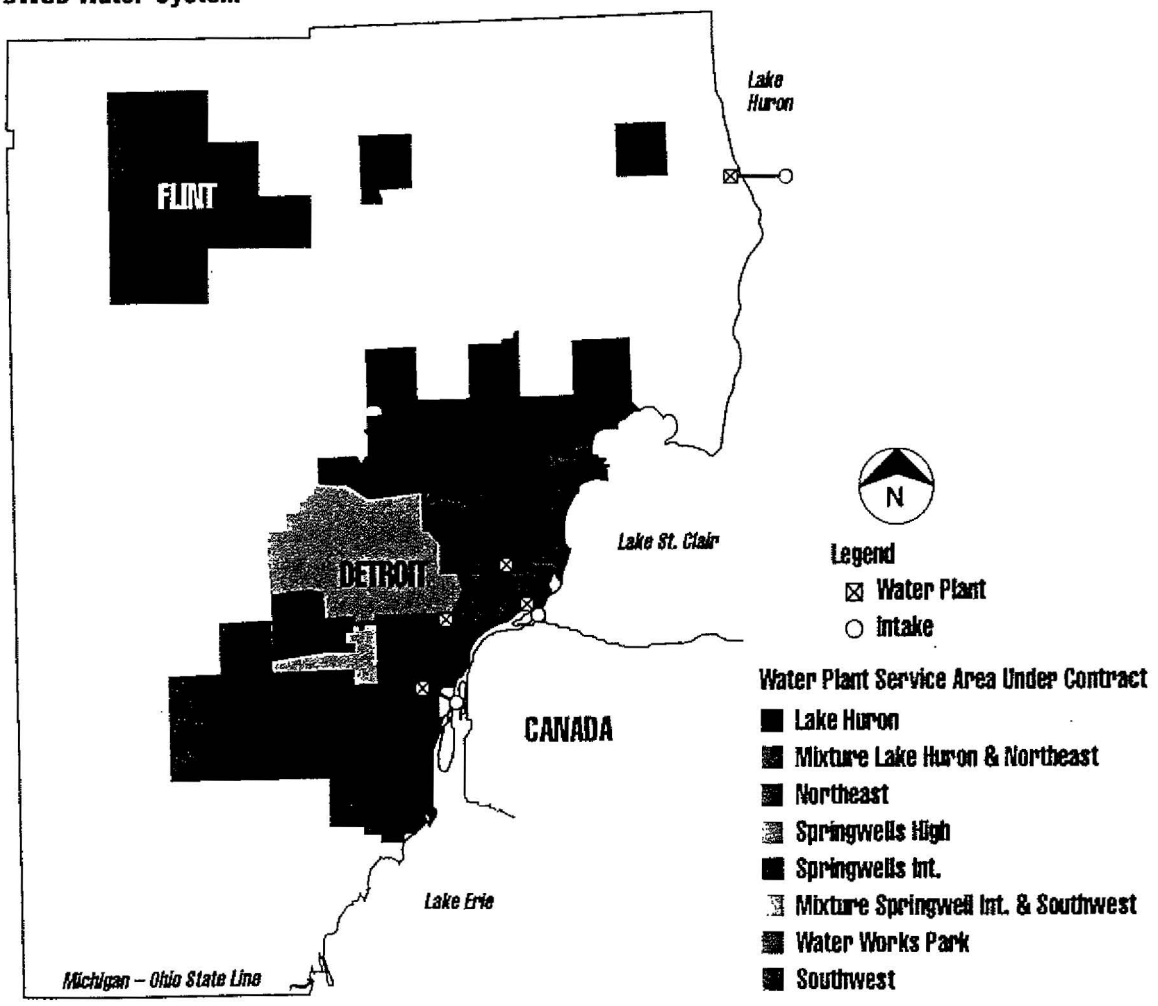
This report presents the results of the DWSD Lead and Copper Corrosion Control Optimization Study.

Existing Conditions

The DWSD obtains water from three intakes. Two of these, the Belle Isle and the Fighting Island Intakes, take water from the Detroit River. The third intake is on Lake Huron. Water is treated at five water treatment plants (WTPs) including the Water Works Park, Southwest, Springwells, Northeast, and Lake Huron WTPs. The water system is shown in Figure ES-1. Treated water from the 5 WTPs is distributed to the City of Detroit and 119 wholesale water customer systems. The DWSD water system serves about 4 million people.

Water leaving the WTPs is of good quality and considered moderately

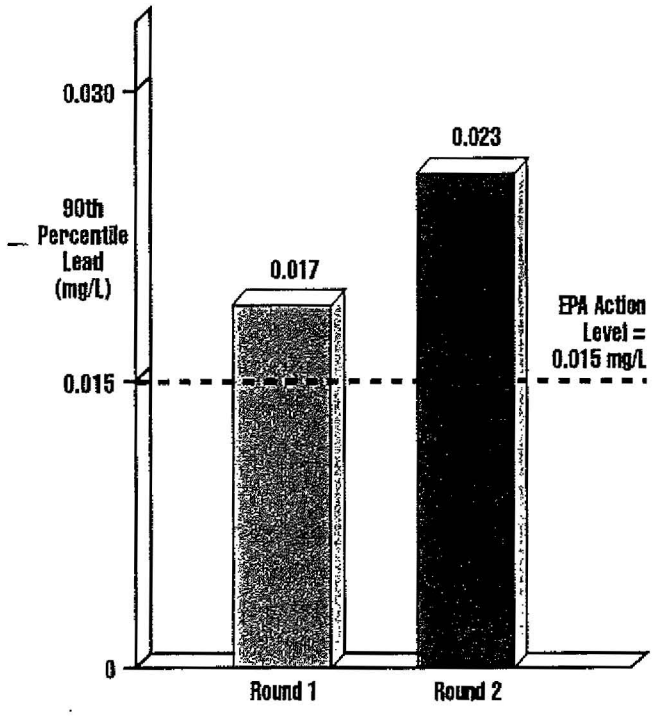
Figure ES-1
DWSD Water System



corrosive. For example, pH from the five WTPs averages 7.4, alkalinity averages 76 mg/L ($CaCO_3$), and hardness averages 100 mg/L ($CaCO_3$). Nevertheless, some increase in lead and copper is resulting from the corrosive action of the water, primarily on service pipe and household plumbing. The main sources of lead are 50:50 lead/tin solder, brass containing lead used in faucets, and lead service lines and plumbing.

The regulation lead AL is 0.015 mg/L at the 90th percentile in home water taps. During the LCR Compliance Monitoring conducted in 1992, DWSD's 90th percentile lead concentration was 0.017 mg/L in the first round and 0.023 mg/L in the second round of sampling (Figure ES-2). Looking at the data in a slightly different manner, 35 to 37 percent of the 119 purveyor water systems exceeded the AL for lead.

Figure ES-2
LCR Compliance Monitoring Results for Lead



For copper, the 90th percentile concentrations were 0.34 and 0.19 mg/L for two rounds of sampling–well below the copper AL of 1.3 mg/L (Figure ES-3). Lead uptake, therefore, is the major concern within the DWSD water system.

Determining the optimal lead control treatment is essential; it is the objective of conducting this corrosion control study. Further, there are an estimated 200,000 lead service lines (LSLs) in DWSD's direct service area and possibly more in areas served by wholesale customers. After corrosion treatment is optimized, the possibility exists that lead ALs may still be over 0.015 mg/L at the 90th percentile. Should this occur, the DWSD would need to embark on a removal program for LSLs, which could cost between $300 and $800 million.

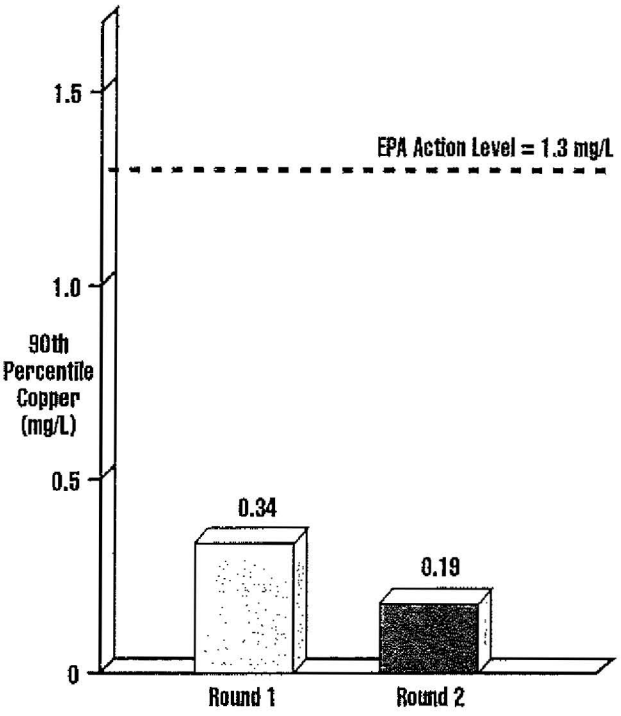
Desktop Analysis

To reduce the number of chemicals for long-term testing, a screening analysis was performed using desktop techniques recommended by U.S. EPA. Lead corrosion control treatment methods examined for their applicability to DWSD are as follows:

- Polyphosphates
- Orthophosphates
- Zinc orthophosphate
- Polyphosphate/orthophosphate blends
- Silicates
- pH adjustment
- Alkalinity adjustment
- Calcium adjustment

The main criteria for selecting a lead corrosion control method is performance for lead uptake reduction. Lead corrosion control methods were also evaluated

Figure ES-3
LCR Compliance Monitoring Results for Copper



based on effects on other drinking water regulations, industrial water users, wastewater treatment, water quality, water treatment operations, consecutive water systems, and multiple sources of supply and treatment.

Based on this evaluation, the following chemical treatments were eliminated from consideration for pipe-loop testing.

- **Polyphosphates.** These products are primarily used to sequester iron, calcium, and manganese and may actually do more to promote lead corrosion than to prevent it.
- **Polyphosphate/Orthophosphate Blends.** These products have not been proven to be more effective than orthophosphates alone for lead reduction, and their proprietary chemical composition makes selection of the optimum product difficult.
- **Silicates.** Sodium silicate inhibitors require a high dosage for lead control and, based on a survey of major industries, would have significant adverse effects on industrial water users.
- **Alkalinity Adjustment.** This technique would have marginal performance for lead reduction based on DWSD water quality and would be impractical for a system the size of DWSD.
- **Calcium Adjustment to Deposit a Calcium Carbonate Layer.** This technique is not a proven method for lead reduction, and would be difficult to produce a uniform layer throughout a distribution system the size of DWSD. Calcium carbonate deposition, however, can occur when pH is raised for lead reduction. This situation is addressed under the pH adjustment alternative.

Lead corrosion control treatment methods applicable for DWSD water are as follows:

- **Orthophosphates.** These products have been shown to be an effective means of lead reduction for water similar to that of the DWSD.
- **Zinc Orthophosphate.** These products are also a proven method of lead reduction, although there is concern about zinc in industrial water and wastewater.
- **pH adjustment.** This technique is also a proven method of reducing lead solubility, although higher pHs affect some industrial users and can increase calcium carbonate deposition.

A survey of 16 Great Lakes area water utilities using water of similar quality to that of DWSD demonstrated the effectiveness of orthophosphate, zinc orthophosphate, and pH adjustment in reducing lead concentrations at the consumers' taps. Those treatment methods, therefore, were retained for further testing in the pipe-loop apparatus.

Pipe-Loop Testing

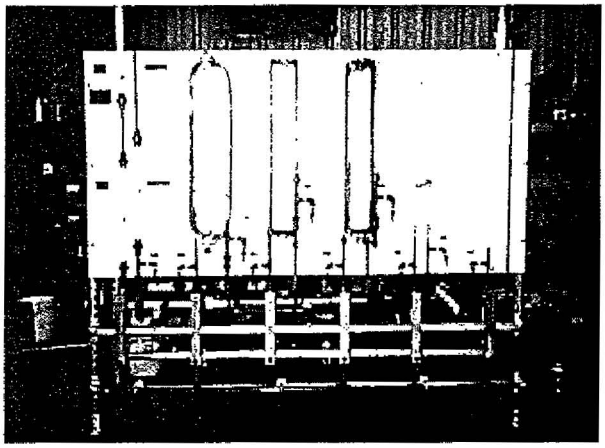
Based on the desktop analysis, it was concluded that the following treatments would be tested in the pipe loops:

- Adjusting pH to 8.1 using sodium hydroxide
- Adjusting pH to 8.7 using sodium hydroxide
- Adding zinc orthophosphate at doses of 0.4 mg/L for zinc and phosphorous (as P)
- Adding orthophosphate using phosphoric acid at a dose of 0.4 mg/L as P

Pipe-loop testing produces information on the corrosion control treatment most likely to effectively reduce lead levels.

It is important to understand that pipe-loop testing is conducted to provide information on the **relative effectiveness** of corrosion control treatments. The results cannot be used to predict actual lead levels that may occur at customers' taps in the water system. Pipe-loop testing, however, produces information on the corrosion control treatment most likely to effectively reduce lead levels and is an approved optimization technique.

Figure ES-4
Typical Testing Apparatus



A pilot-scale testing apparatus was designed and constructed to test each of the treatment techniques on different pipe materials. Five pipe-loop racks were constructed: one for each of the four methods and another for control (no treatment provided). Each pipe-loop rack included one new lead pipe loop, two identical copper pipe loops with lead soldered joints, one brass tester, and one section of old lead pipe. Three weight loss testers were also included for measuring corrosion rates of steel, galvanized steel, and copper. A typical testing apparatus is shown in Figure ES-4.

The pipe-loop facility was installed in the lower level of the Water Works Park High Service Pump Station and operated from January to November, 1993. After an initial period of passivation, water samples were collected on a weekly basis and analyzed for lead, copper, and zinc. The 1-liter water samples were taken after the water had been in contact with the pipe loop materials for 8 hours. This was done to represent the first-draw sampling required by the LCR. Additional sampling included daily monitoring for pH, chemical doses, and temperature. Disinfection

by-products (DBPs) and pipe insert weight loss were done quarterly. Flavor profile analyses to assess any changes in tastes or odors were run monthly.

Results of pilot testing indicated:

- The inhibitor treatments, zinc orthophosphate, and phosphoric acid are statistically better than the untreated control for both old and new lead piping (Figure ES-5).
- For lead solder and copper piping, the median lead levels were lowest in the water with inhibitors (zinc orthophosphate and phosphoric acid), but only the phosphoric acid results were statistically better than the other loops (Figure ES-6).
- For brass, the results indicated that the treatments were no better than the control; however, lead levels were near the detection limit in the brass testers (Figure ES-6).
- Zinc orthophosphate and phosphoric acid were also found to be the most effective treatments in reducing copper (Figure ES-7).

Figure ES-5
Relative Lead Levels from Lead Pipe

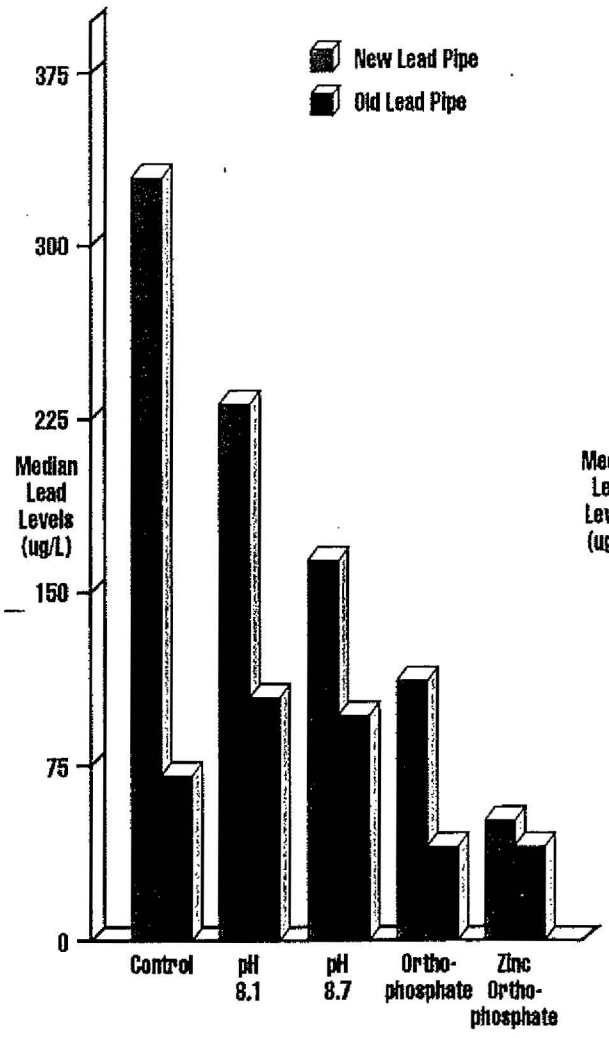


Figure ES-6
Relative Lead Levels from Soldered Copper and Brass

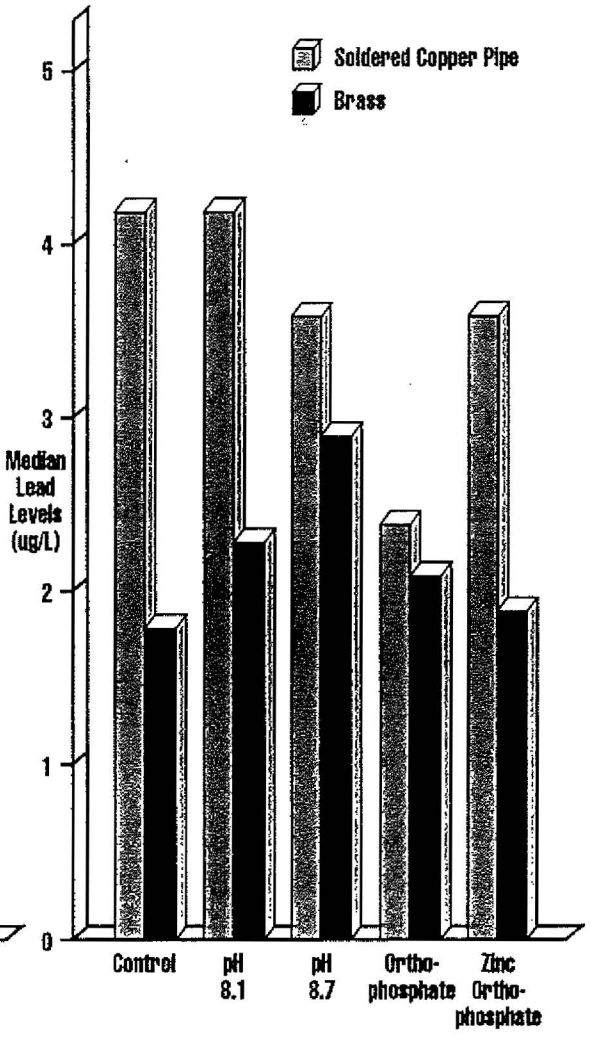
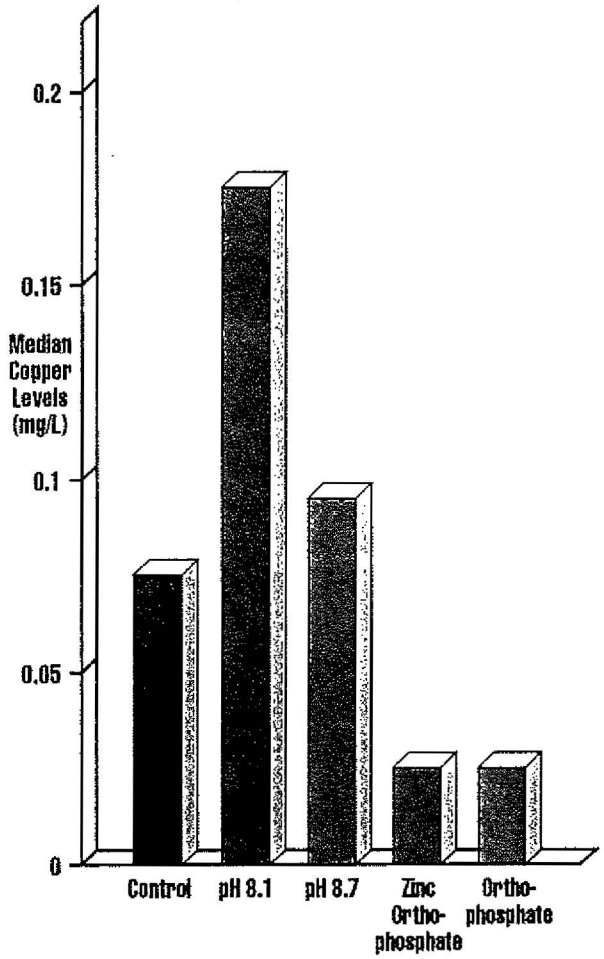


Figure ES-7
Relative Copper Levels from Copper Pipe



- DPBs were increased for the pH adjustment treatments as expected. The DBPs formed as a result of this increase, however, did not exceed EPA-proposed limits. The orthophosphate and zinc orthophosphate did not increase DBPs.
- None of the corrosion control treatments had an adverse effect on the taste and odor of the water produced.

Evaluating Corrosion Control Treatment

The four corrosion control treatments tested in the pipe loops were evaluated based on the following criteria:

- Performance for lead uptake reduction
- Feasibility of implementation within regulatory and functional constraints
- Reliability in terms of operational consistency and continuous corrosion control protection
- Cost

Pipe-loop data analyses indicated orthophosphate and zinc orthophosphate are most likely to yield the best results for lead reduction. pH adjustment was not as effective for lead control. Orthophosphate and zinc orthophosphate were effective at reducing copper levels.

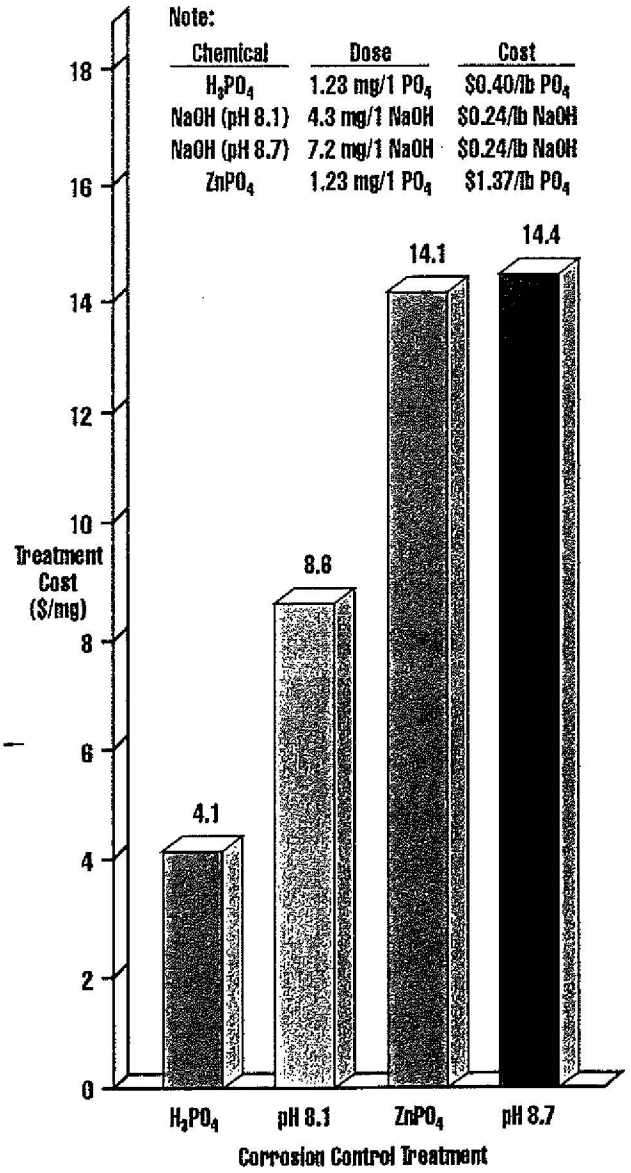
A feasibility analysis indicated that industrial water users would be affected adversely by zinc or a higher water pH. Wastewater operations would be adversely affected by zinc and orthophosphates loadings. There were no major effects of corrosion control treatment on drinking water regulations. pH adjustment could, however, decrease disinfection effectiveness and increase DBP formation.

The reliability of zinc orthophosphate and sodium hydroxide chemicals is less than would be expected for orthophosphates. Zinc orthophosphate is a proprietary chemical with price and supply constraints. Sodium hydroxide availability and price depend on market conditions. Orthophosphate (phosphoric acid) is available as a generic chemical and is commonly used in the food and bever-

age industry; therefore, price and availability are more stable. From a WTP-operations standpoint, pH adjustment is less reliable because pH can change with raw water quality and treatment conditions.

The chemical cost of each treatment alternative is shown in Figure ES-8. Phosphoric acid addition is less than half the cost of pH adjustment to 8.1, the next lowest chemical cost. This represents an average cost savings of about $2,400 per day. Phosphoric acid could save the DWSD about $10 million in present worth in the next 20 years compared to the next lowest cost alternative.

Figure ES-8
Treatment Alternatives Costs



Selecting Corrosion Control Treatment

The relative ranking of alternatives for the four criteria (performance, feasibility, reliability, cost) is summarized in Figure ES-9. Values of 1 through 4 were assigned for each treatment alternative in each criteria category (1 was best; 4 worst). Because performance for lead reduction was the main criteria, it was given a weight of 2. Each of the other criteria was given a weight of 1.

Orthophosphates were ranked highest overall. Zinc orthophosphate was second, mainly because of its adverse effects on industry, wastewater plant operations, and higher costs. pH adjustment was ranked lowest because it is less effective for lead reduction, less reliable, and demonstrates more adverse effects on industry and drinking water regulatory compliance.

Orthophosphates were selected as the optimal treatment alternative for full-scale lead corrosion control.

Based on corrosion control theory, comparison with analogous water systems, and the extensive pilot plant studies, orthophosphates were selected as the optimal treatment alternative for full-scale lead corrosion control.

Figure ES-9
Alternatives Ranking by Criteria

Treatment	Evaluation Criteria				
	Performance wt.= 2	Feasibility wt.= 1	Reliability wt.= 1	Cost wt.= 1	Weighted
Phosphoric Acid	2	1	1	1	7
Zinc Orthophosphate	1	4	2	3	11
pH 8.1	4	2	3	2	15
pH 8.7	3	3	4	4	17

Legend: 1 = Best; 4 = Worst

Phosphoric acid is the recommended form of adding orthophosphate. It is a generic chemical and can be bid competitively. It does not add sodium to the water and costs less than any other form of orthophosphate. In addition, the finished water pH is already in the optimal range for lead solubility reduction by phosphates, so pH adjustment is not required.

The recommended dose of phosphoric acid is 1.2 mg/L as P for initial passivation and a sustained dose of 0.4 mg/L as P for maintaining control of lead uptake. Values may be adjusted based on full-scale results.

Full-Scale Implementation

The LCR requires optimal corrosion control treatment installation by January 1, 1997. To meet this deadline, the implementation schedule in Figure ES-10 is proposed. The first element of implementation is to conduct full-scale demonstration testing in the distribution system served by one of the WTPs before installing chemical feed facilities in the other four plants. Operation of lead corrosion control facilities at all plants is planned for May 1996. This will provide additional time to optimize the system before lead monitoring is required in 1997.

The chemical equipment required for each WTP is summarized in Table ES-1. A schematic of a typical liquid chemical system is shown in Figure ES-11.

The cost of lead corrosion control chemicals is estimated to be about $0.87 per year per household.

The estimated capital cost for corrosion control facilities at the five WTPs is $3,740,000. The estimated cost of chemicals is $868,000 per year. The cost of lead corrosion control chemicals is estimated to be about $0.87 per year per household.

A monitoring program will be established before and after corrosion control treatment is implemented to determine performance for lead reduction and effects on other water quality parameters. If lead is reduced to below the EPA AL of 0.015 mg/L for two consecutive 6-month monitoring periods, other methods of lead reduction, such as removing lead service lines, will not be required.

If the lead AL is still exceeded after optimization and stabilization, a program for lead service line removal should be developed in addition to an ongoing public education program.

Operation of lead corrosion control facilities at all plants is planned for May 1996.

Figure ES-10
Implementation Schedule

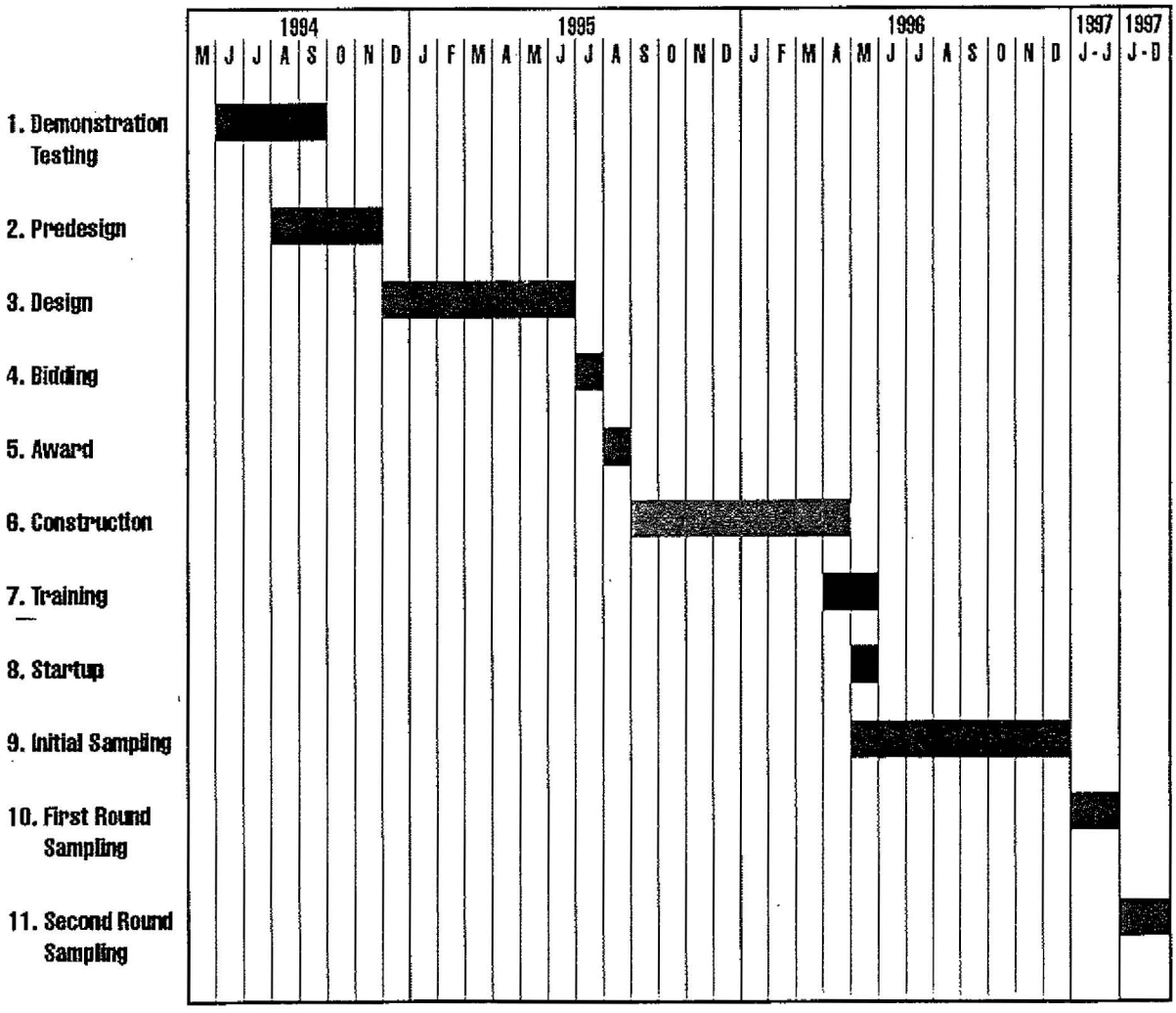
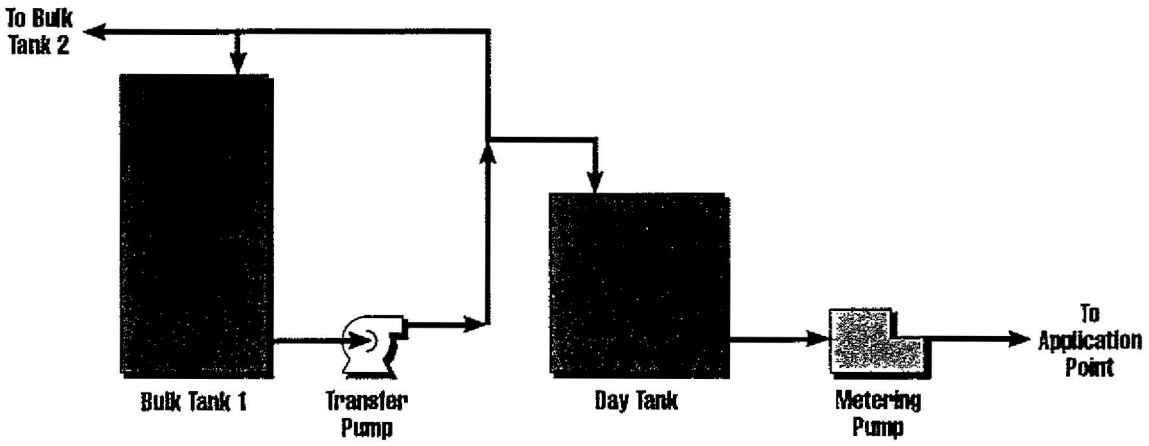


Table ES-1
Chemical Equipment Summary

	Southwest Water Plant	Water Works Park Water Plant	Northeast Water Plant	Springwells Water Plant	Lake Huron Water Plant
Number of bulk tanks	2	2	2	2	2
Bulk tank capacity, each (gal)	4,000	4,000	4,000	6,000	4,000
Number of day tanks	1	1	1	1	1
Day tank capacity (gal)	200	200	200	400	200
Number of feeders	3	3	3	3	3
Feeder capacity, each (gpd)	1 @ 200 2 @ 650	1 @ 300 2 @ 650	1 @ 250 2 @ 800	1 @ 600 2 @ 1,500	1 @ 350 2 @ 650
Number of transfer pumps	2	2	2	2	2
Transfer pump capacity each (gpm)	15	15	15	30	15

Figure ES-11
Liquid Chemical System Schematic



City of Flint Lead and Copper Rule Monitoring History						
Monitoring Period	90th Percentile (parts per billion)	Number of Samples above 15 ppb	Samples Required	Samples Collected	Required Frequency	
Jan. - June 2015	11 ppb	6	60	68		*Unofficial
July - Dec. 2014	6 ppb	2	100	100	6 months	
New Source and Treatment - Flint River and Flint WTP						
June - Sept. 2011	0 ppb	0	23	23	3 years	
June - Sept. 2008	0 ppb	0	33	33	3 years	
June - Sept. 2005	1.4 ppb	0	33	33	3 years	
June - Sept. 2002	4 ppb	1	33	33	3 years	
June - Sept. 2001	4.4 ppb	0	33	33	1 year	
June - Sept. 2000	7 ppb	2	33	33	1 year	
Jan. - June 1999	5 ppb	0	33	33	1 year	
July - Dec. 1998	7.4 ppb	1	33	33	6 months	
July - Dec. 1997	5 ppb	1	33	33	6 months	
Jan. - June 1997	4.5 ppb	1	33	33	6 months	
DWSD Study and OCC Treatment						
July -Dec. 1992	14.4 ppb	3	33	33	6 months	
Jan. - June 1992	15 ppb	4	33	33	6 months	

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

Vernice Davis Anthony, Director

March 15, 1993

City of Flint
1101 South Saginaw Street
Flint, Michigan 48502

WSSN: 2310

Attention: Mr. Charles Smith, Utilities Superintendent

Subject: Lead/Copper Monitoring

Gentlemen:

We have reviewed the results of the second round of the lead and copper monitoring completed for your water supply for the period of July 1, 1992, through December 31, 1992. The samples were collected and analyzed to comply with the U.S. Environmental Protection Agency's Lead and Copper Regulation. The action levels specified in the regulation require that the 90th percentile results from the distribution system samples for lead and copper not exceed 15 and 1300 ug/l, respectively.

Since the 90th percentile lead level for your water system is 14.4 ug/l, the lead action level of 15 ug/l has not been exceeded. Also, the 90th percentile copper level was significantly below the copper action level of 1300 ug/l. This means that your water system has met both action levels for the first two monitoring periods.

Although many of the Detroit Water and Sewerage Department (DWSD) customers have met the action levels, DWSD is required to conduct a study to determine whether their water treatment processes can be improved to further reduce corrosion. The study is to be completed by July 1, 1994, and any recommended treatment modifications must be in place by January 1, 1997.

RECYCLED PAPER

Further monitoring of your water system for lead and copper will not be required until the DWSD study is complete and any additional corrosion control treatment has begun. We will inform you when monitoring is again required. This may be as late as January 1997.

If you have any questions, please call me at (517) 335-8309.

Sincerely,

Timothy A. Benton, P.E.
District Engineer
Division of Water Supply
Bureau of Environmental and
Occupational Health

TAB:im
cc: John Weisenberger, Water Plant Supervisor
cc: Genesee County Health Department

From: Workman, Wayne (TREASURY)
Sent: Tuesday, October 13, 2015 9:38 AM
To: Muchmore, Dennis (GOV)
Cc: Saxton, Thomas (Treasury)
Subject: Re: Flint

Checking on it now

Sent from my iPhone

> On Oct 13, 2015, at 9:07 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> A lot of complaints about Natasha these days. Of course, I have a lot of complaints about myself and this Flint thing. If I had acted more quickly on some of my minister's complaints we at least would have had a more robust discussion. Do we have a copy of the Veolia conclusions somewhere?

From: Dayne Walling [dwalling@cityofflint.com]
Sent: Sunday, January 18, 2015 4:16 PM
To: GovernorsOffice; Snyder, Rick (GOV)
Cc: Joshua Freeman; senjananich@senate.mi.gov; Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Gerald Ambrose
Subject: Flint Water
Attachments: Mayor Governor Letter Flint Water Jan 18 2015.PDF

Follow Up Flag: Follow up
Flag Status: Completed

Dear Governor,

There is nothing more important in Flint right now than fixing the water problems. Attached is a letter outlining a plan with my request for your support. I urge you to work with all of us in the Flint community to implement solutions.

Sincerely,

Mayor Walling

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

CITY OF FLINT

Dayne Walling
Mayor

January 18, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing to convey serious concerns about water quality and to request your support for my proposed Flint Water Improvement Plan. Access to safe and clean water is a basic human right, and, therefore, policy and budget decisions need to ensure that water is affordable and secure for everyone in Flint and all across Michigan It is essential there is City, State and Federal cooperation to address the challenges here and to meet the needs of vulnerable populations.

The Flint Water Improvement Plan is focused in five areas: safety, quality, access, investment and education. The plan puts safety and quality first because this is fundamental. It is designed to be a sustainable solution for the City of Flint and the community as we move towards a new permanent water supply from Lake Huron through the Karegnondi Water Authority. My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the State and Federal levels.

Safety & Quality

- 100% Safety is the standard
- City of Flint reports testing data to the public to assure safety and expands testing sites and frequency
- Bring on experienced river water treatment operational management in the City of Flint

Access

- Announce an amnesty program for Flint water service turn-ons and reduce the turn-on fee
- Develop a revised affordable payment plan policy to encourage customers to return
- Design Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for the elderly and vulnerable families

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State investments
    - State approves City of Flint's Distressed Cities Fund applications

- Federal and State support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community
- Federal and State grants for infrastructure improvements in alignment with the Flint Master Plan

* City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

* Develop a community partnership with universities to provide household and business customers with information on testing and conservation
* Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information and water assistance with the Keep the Water Flowing Fund and support services
* Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

It is also critical to restore the public confidence in Flint Water. The implementation of this plan must be accompanied by extensive community engagement including local elected officials. My objective is to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and government personnel.

It is imperative that we communicate better and provide residents more information. I understand representatives from the Michigan Department of Environmental Quality will be joining a public forum this week at City Hall. This engagement going forward is vital so thank you for supporting their efforts. I think this issue of transparency is important for communities all across the State. I recommend a review of the applicable laws and policies and, at a minimum, a new requirement that water testing data be reported publicly no less than quarterly by law in all Michigan communities in Flint's population category.

Thank you for the consideration Governor. There is nothing more important in Flint right now than fixing the water problems. We must work together to identify funds to repair and update the water treatment facilities and city-wide infrastructure and to help those persons without access to clean water so that the entire Flint community has sustainable, safe, secure and affordable water now and into the future. This is an important issue for the state of our State of Michigan and I urge you to work with us to implement solutions.

Sincerely,

Dayne Walling, Mayor
City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; Flint Emergency Manager Jerry Ambrose

From: Muchmore, Dennis (GOV)
Sent: Thursday, February 05, 2015 2:19 PM
To: Wurfel, Brad (DEQ)
Cc: Murray, David (GOV); Wurfel, Sara (GOV); Stanton, Terry A. (Treasury)
Subject: Re: pastor harris

I talked with him earlier today. We can say that we are exploring all the options available to us to respond to the concerns of the citizens of Flint. Pastor Harris is our point of contact and we can say that also.

On Feb 5, 2015, at 2:15 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> Thoughts on this? Who responds? How?
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Fonger, Ronald" <[redacted]
> > **Date:** February 5, 2015 at 1:06:36 PM EST
> > **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> > **Subject: pastor harris**
> >
> > Brad:
> > I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action. He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.
> > Would you or Dave Murray want to comment on whether that's under consideration?
> > I just wanted you guys to know what he's saying – without equivocation – in the story.
> > Thanks,
>
> Ron Fonger
> MLive Media Group
> Reporter
>
> mobile [redacted]
> email [redacted]
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Muchmore, Dennis (GOV)
Sent: Thursday, February 05, 2015 3:11 PM
To: Stanton, Terry A. (Treasury); Wurfel, Brad (DEQ); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Only problem with that is that the citizens of Flint say they are paying more now than they did when they were connected with DWSD. The city, after all, is not giving the water away free right now, so there is some kind of equalization that comes into play here. Additionally, we just gave them $2M so if we need to use it for a reconnect that's probably a good use of the money as opposed to people refusing to use city water. Since we're in charge, we can hardly ignore the people of Flint. After all, if GM refuses to use the water in their plant and our own agencies are warning people not to drink it, another expressing continuing concern over quality, and the differential between what we now collect and what we would pay DWSD is not significant, we look pretty stupid hiding behind some financial statement.

From: Stanton, Terry A. (Treasury)
Sent: Thursday, February 05, 2015 2:19 PM
To: Wurfel, Brad (DEQ); Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Would add that the city (Earley, Ambrose, etc.) have been unequivocal that doing so would cost at least $1m per month...per the DWSD "offer"...and the city simply cannot afford that.

I have also heard that the city no longer owns a section of pipeline that would have to be used in making any re-connection...making that more difficult and expensive.

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 05, 2015 2:15 PM
To: Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Stanton, Terry A. (Treasury)
Subject: Fwd: pastor harris

Thoughts on this? Who responds? How?

Sent from my iPhone

Begin forwarded message:

> **From:** "Fonger, Ronald" <[redacted]
> **Date:** February 5, 2015 at 1:06:36 PM EST
> **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> **Subject: pastor harris**
>
> Brad:
> I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action.
> He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.

Would you or Dave Murray want to comment on whether that's under consideration?
I just wanted you guys to know what he's saying – without equivocation – in the story.
Thanks,

Ron Fonger
MLive Media Group
Reporter

[redacted]
email [redacted]
address 540 S. Saginaw St. #101, Flint MI 48502

From: Clayton, Stacie (GOV)
Sent: Friday, March 06, 2015 10:27 AM
To: Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Murray, David (GOV)
Cc: Hollins, Harvey (GOV)
Subject: FW: Tap Filters

You all were not included on the original email and Harvey wanted to make sure you had this information.

Stacie

Begin forwarded message:

> **From:** "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
> **Date:** March 5, 2015 at 4:26:25 PM EST
> **To:** "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Wyant, Dan (DEQ)" <WyantD@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>
> **Cc:** "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
> **Subject: FW: Tap Filters**
>
> Harvey,
> Since group call Tuesday I have been working out how the filter idea might take shape.
>
> To reiterate some key points so we're all clear:
>
> 1. DEQ does not inspect individuals' homes in a situation like this. It's the city's system, their operators handle all complaints and maintenance. In fact, our folks alerted me that the city's got union rules in place forbidding any contractor from touching the system.
> 2. DEQ's role is limited to ensuring the plant is operating to state standards and the water it produces meets potability standards. The aesthetic issues drawing concern from residents – color, odor, taste – stem from a variety of things. Age of the system and prolonged lack of upkeep is the leading factor. But in some areas, another contributing factor is changes in water flow – source used to come from the south, now comes from the north, so some pipes are flowing in reverse, stirring up whatever was settled for a long time. In some sections, large pipes that historically served large communities are now serving a much smaller customer base, contributing to water stagnating in the system. In some areas, household connections are old and worn, so two neighbors may be having dramatically different experiences. My point is, the challenge takes many forms and there's no single solution that will bring sweeping change. The two consultants hired by the city have, as I understand it, both reinforced this idea in their assessments, so that's good.
>
> 3. The fix for this will be years in the making, truly. Even if full funding were available, 'big dig' projects can't all happen at once. The city needs to get an assessment of its infrastructure so it can prioritize its needs, and I understand they're working on that. In the near term, maintenance this spring / summer –

things like cleaning the pipes in key sections and flushing the system via the hydrants – could offer some short term results. I know nobody wants to just wait for spring, but that is something important to keep in mind.

4. In the meantime, the group discussed possibly making home water filters available somehow. The National Safety Foundation is a Michigan company, headquartered and founded in Ann Arbor, that develops standards for all kinds of infrastructure. They're a globally recognized source for standard setting. A look at their site reveals there are myriad filtration options on the market and within each type (faucet mounted, whole house line filters, etc) there are filters that focus on different aspects of purification.

   If this idea begins to get legs, I'd suggest testing some different models on the local water at the customer level to see if they work. I'd also suggest the idea be focused on tap-mounted models to promote clean, appealing drinking water. And I'd suggest this program could be funded in whole or in part by the state, but would need to be administered by the city (reinforcing the fact that they own, operate and service the system). I've got some information on filter models below.

   Two more considerations: One, while the state has provided residents in some communities with bottled water in the past, it always has to do with their water being somehow contaminated – as in, some kind of chemical plume that impaired local drinking water sources. This would be the first time the state took steps to deal with what is an aesthetic issue on a system where the water is meeting state drinking water standards.

Water filter info:
ANSI NSF Standard 42 Covers bacteriostasis, taste and odor (associated only with chlorine removal), and other aesthetic conditions
http://standards.nsf.org/apps/group_public/download.php/19895/NSF_42-11%20-%20watermarked.pdf

ANSI NSF Standard 53 Covers health effects removal
http://standards.nsf.org/apps/group_public/download.php/19896/NSF_53-11a%20-%20watermarked.pdf

It is important to note that the filters are not required to meet all aspects of the standard, only the portions they want to make claims for. So product information for each filter must be reviewed to determine its applicability.

Most of these point of use filters are basic activated carbon filters that simply remove taste and odor specifically associated with chlorine, not other things like iron, manganese, hydrogen sulfide, etc. that can also impact taste and odor as well as color.

It is important to recognize that taste and odor is generally an individual preference and such standards have for the most part not been developed because groups of individuals may still consider taste and odor issues to exist even after levels for such a standard have been met.

Other considerations are that the test water for such filters attempting to meet the standard uses hardness levels of 170 mg/L or less. Flint's water at times may be above this level, which could then impact filter performance and longevity.

Most of these filters are designed to be replaced after 100 gallons or less of use, a period of about 3 months for most households. In addition the tests allow for initial pressure drops of up to 15 psi. This may limit use in households that already rely on minimum pressure within their household plumbing.

Regarding the health effects standards, as the Flint water system already meets such requirements, with the exception of the current TTHM locational running annual average, there is little point to the use of these filters for such a purpose.

To the point you'd asked about the other day, while Flint and Detroit are leading examples of unmaintained infrastructure, Flint is not alone by any means.

This recent infrastructure report card
http://www.infrastructurereportcard.org/michigan/michigan-overview/
Lists Michigan with a $13.8 Billion need over the next 20 years.

http://www.infrastructurereportcard.org/a/#p/state-facts/michigan

Here's a link to the 2009 Report Card for Michigan Infrastructure
http://www.michiganreportcard.com/

From the report:

"A significant portion of the state's primary distribution system is nearing 100 years old. CWS are facing a significant challenge to maintain the vast network of aging, underground infrastructure. Within the city of Detroit alone, approximately 80% of its distribution piping was installed prior to 1940, which is not unusual for CWS in Michigan."

"The age of the majority of the state's distribution system is the primary contributor to normal decay and failure. In many cases, pipe life has far exceeded useful service life. Much of the older water systems consist of undersized mains constructed of materials such as unlined cast iron pipe. Minor fluctuations in system flows or pressure may cause red water complaints and even result in pipe failure. All CWS should have routine flushing and valve maintenance programs; however many are hesitant due to the time and cost."

"Under the Stage 2 Disinfection Byproducts Rule, all CWS that disinfect are required to provide increased trihalomethane (THHM) and haloacetic acid (HAA5) monitoring due to the potential byproducts of chlorine reactions within the pipe system. Corrosion, scale, solid suspension on the interior sidewall of pipe, in addition to the age and condition of the system will require diligent rehabilitation investment to maintain system integrity."

"While better materials and advanced technology is available to replace the aging distribution system, resources remain scarce when compared with the magnitude of the rehabilitation task at hand. Too often, distribution system replacement costs are underfunded and the first item to be slashed when budget problems arise. Overall, distribution system maintenance is reactionary in much of the older systems. Since the majority of the antiquated system will require removal and replacement beyond the

CWS funding resources for systematic upgrade, a reactionary rehabilitation program is inevitable and must be funded accordingly."

Call or email me if you need anything further.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

Subject:	RDS/DM/BM/NL/DW/Maggie Pallone/Karen Tommasulo/Col. Etue/HH - Meeting Re: Flint Water
Location:	Governor's Office, Romney
Start:	Tue 9/29/2015 12:00 PM
End:	Tue 9/29/2015 12:30 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	GovCalendar
Required Attendees:	Mcbride, Bill (GOV); Wisniewski, Wendy (GOV); Muchmore, Dennis (GOV); Lyon, Nick (DCH); Grijalva, Nancy (DCH); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Etue, Kriste (MSP); Klotz, Josephine (MSP); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Hansen, Rachel (GOV)
Optional Attendees:	Clement, Elizabeth (GOV); Agen, Jarrod (GOV)

[redacted]

HH by Phone

[redacted]

Host: [redacted] – RH to dial in as host

From: Muchmore, Dennis (GOV)
Sent: Friday, September 04, 2015 9:13 AM
To: Saxton, Thomas (Treasury)
Subject: RE: Flint Water

No, makes no sense to do so at all. We just need to get to the new connection…just can't wait to put this one behind me.

From: Saxton, Thomas (Treasury)
Sent: Thursday, September 3, 2015 5:36 PM
To: Redford, James (GOV) <RedfordJ@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Cc: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: FW: Flint Water

Gentlemen… in the attached (which you have likely seen before) is a description of the cost to reconnect to DWSD. I assume/hope no one is still seriously considering that option but if you need anything more give us a call.

From: Muchmore, Dennis (GOV)
Sent: Friday, January 23, 2015 6:09 PM
To: Saxton, Thomas (Treasury)
Subject: Fwd: "Anonymous" threatening to do operation in Flint

Better warn Jerry

Sent from my iPhone

Begin forwarded message:

> **From:** "Adler, Ari (GOV)" <AdlerA@michigan.gov>
> **Date:** January 23, 2015 at 3:39:28 PM CST
> **To:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>, "Clement, Elizabeth (GOV)" <clemente@michigan.gov>, "Walsh, John (GOV)" <WalshJ@michigan.gov>
> **Subject: "Anonymous" threatening to do operation in Flint**
>
> We need to make sure things are buttoned up in Flint as it relates to the water treatment operations, apparently.
>
> Via Twitter just now:
>
> **AnonCorpWatch** 4:28pm via Twitter Web Client
> #anonymous is not dead!
>
> #OpFlint
>
> @anetoughnerd #ExpectUs

About

Corporations have been getting way with far too much for far too long. It is time that we, the citizens of the world, educate ourselves and take action against these Corporations. We all understand that for past few generations, we have allowed laws to be written, tax incentives to be created and have allowed loop holes to be made in environmental policy. We have allowed lobbiests in Washington , and other governments around the world, to make this capitalist institution called the "Corporation" get away with practices that are unacceptable. We have not understood the consequences until it is too late. We have felt too overwhelmed by the do's and don'ts that we have felt we had to respect, that we have allowed these powerhouses to benefit from massive profits, while we the majority are struggling.

It is time that we the people take matters into our own hands. It is time to take responsibility for our ignorance. We must forgive ourselves for allowing this economic "Grand Canyon" between the mega wealthy and the other 90% of us. We hear our leaders ask us to make further sacrifices by accepting higher interest rates in order to pay for the mess they got us into. They have repeatedly tried to take away our voice. It is time forgive us our sins and move forward. We will no longer allow these Corporations and Government puppets to silence us.

Like others before us, we are taking matters into our own hands. We are going to start keeping tabs on these Corporations. We are going to collect information and share it. We are going to spread the truth as far as we can. Most importantly we are going to take action!

Be a voice in a voiceless world. Share your knowledge of what you know with us so that we can unite and learn from each other, and become a source of power and change.

Hey Corporations! We are watching you!

We are Anonymous

We are Legion

We never Forgive

We never Forget

Expect Us!

From: Muchmore, Dennis (GOV)
Sent: Tuesday, March 03, 2015 12:01 AM
To: Kelly Rossman-McKinney
Subject: Re: Contaminated Drink Water if Flint

It's an on-going issue that has to do with the long term viability of the city's finances. I'm gone but Beth and Harvey are handling. We've got to do something for people in Flint because it's right to do more than it works financially. We've got to work on getting them water they can trust but there is no easy solution. This is a tough one, as everyone's position is correct just not easy.

Sent from my iPhone

On Mar 2, 2015, at 8:26 AM, Kelly Rossman-McKinney [redacted] wrote:

> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

Cell: [redacted]
Office: (517) 487-9320
Fax: (517) 487-5080

From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
Sent: Monday, March 02, 2015 7:36 AM
To: Kelly Rossman-McKinney
Subject: Fwd: Contaminated Drink Water if Flint

Welcome to Monday. Please advise asap as to any next steps you recommend, if any.

---------- Forwarded message ----------
From: "Dayne Walling" <dwalling@cityofflint.com>
Date: Mar 2, 2015 7:29 AM
Subject: Fwd: Contaminated Drink Water if Flint
To: "Gerald Ambrose" <gambrose@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, "Peter Bade" <pbade@cityofflint.com>
Cc:

FYI:
---------- Forwarded message ----------
From: [redacted]
Date: Sat, Feb 28, 2015 at 2:09 PM

Subject: Contaminated Drink Water if Flint
To: "randall@udayton.edc" <randall@udayton.edc>
Cc: "mail103@foxtv.com" <mail103@foxtv.com>, WFLT 1420 Am <wflt1420am@aol.com>, Abc12news <abc12news@abc12.com>, Wnem Desk <wnem@wnem.com>, Scot Johnson Wnem <[redacted]'news@wjr.com" <news@wjr.com>, "assigmentdesk@wdiv.com" <assigmentdesk@wdiv.com>, "D. Adams" [redacted] fox2newsdesk@foxtv.com, [redacted] "B. Thorne" <bthorne@flintjournal.com>, [redacted] "wxyzdesk@wxyz.com" <wxyzdesk@wxyz.com>, [redacted] "cspacouriernews@yahoo.com" <cspacouriernews@yahoo.com>, [redacted]'promotion@wsmh.com" <promotion@wsmh.com>, Eric Mays <emays@cityofflint.com>, Emergency Manager <em@cityofflint.com>, Brenda Williams <brwilliams@visionunpinc.com>, [redacted] <jpoplar@cityofflint.com>, [redacted]Wantwaz Davis <wdavis@cityofflint.com>, [redacted] "hwinford@cityofflint.com" <hwinford@cityofflint.com>, Inez Brown <ibrown@cityofflint.com>, Peter Bade <pbade@cityofflint.com>, "knelson@cityofflint.com" <knelson@cityofflint.com>, [redacted], Scott Kincaid <skincaid@cityofflint.com>, [redacted] Dyane Walling <dwalling@cityofflint.com>, [redacted]

Good Afternoon, Attorney Randall!

Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!

We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!

I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.

The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluoride/ej.html regarding "Environmental Racism" I have attached an article from

the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.

Thank you very much in advance!!

I remain.

[redacted] Concerned Resident

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

<CCF02282015_0002.pdf>

From: Muchmore, Dennis (GOV)
Sent: Thursday, March 05, 2015 8:32 AM
To: Wurfel, Brad (DEQ)
Subject: Re: FLINT JOURNAL : posted at 1 p.m. today.

Consider the source....

On Mar 3, 2015, at 3:29 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

<image001.jpg>

Flint water almost like 'gas chambers for Jews,' says Sharpton group activist

Ron Fonger | rfonger1@mlive.com By **Ron Fonger | rfonger1@mlive.com** The Flint Journal on March 03, 2015 at 12:54 PM, updated March 03, 2015 at 2:10 PM

The Rev. Charles Williams II speaks during a press conference for the National Action Network's coordinated response to the Trayvon Martin verdict in this 2013 Flint Journal file photo.Flint Journal file photo

FLINT -- The president of the Michigan chapter of Al Sharpton's National Action Network says Flint water is "almost as bad as gas chambers for Jews."

The Rev. Charles Williams II, speaking at a news conference and water giveaway in Flint on Monday, March 3, made the comment, which **appeared on television station WEYI-TV**.

The city of Flint issued a statement saying officials are "extremely disappointed" by the pastor's remarks, including his comparison of consumption of Flint's water to "genocide."

"We are extremely disappointed in Rev. Charles Williams' comments but certainly understand -- and share -- his frustration," the city statement says. "With that said, we find Rev. Williams' accusations are a gross misrepresentation of the Flint water condition and a wholly inappropriate comparison."

When contacted by The Flint Journal-MLive for comment today, Williams referred a reporter to his Twitter page.

Steven C. Low, executive director of the Flint Jewish Federation, called Williams' comments "an inappropriate invocation of the Holocaust" that "diminishes what survivors went through."

"Drawing such a comparison doesn't shed any light on the water problems," said Low, who called on Williams to apologize for his remarks.

The news conference Williams spoke at is one of several that have been held since Flint **notified customers in January** that the city is in violation of the Safe Drinking Water Act because of the level of total trihalomethanes (TTHM) in water tested during the last 10 months.

Outspoken **residents have since protested** the price, color, odor and overall quality of the water.

City officials have said Flint **water is safe for the vast majority** of the people to drink but warned in January notices that TTHM can pose increased health risks for those with a compromised immune system, the elderly, pregnant women and infants.

Testing during the **last two months has shown the city is meeting** all health and safety standards for water, and a consultant is expected to deliver a report this week, detailing recommendations for improving the quality of drinking water here.

Flint's water problems, including **multiple boil water advisories** last summer, bloomed after the city began using the Flint River as its drinking water source in April.

Prior to that switch, the city had used Lake Huron water, pre-treated and purchased from the city of Detroit.

The Flint statement says "some people may still have issues with discoloration, or do not like the taste of the (higher) mineral content river water (but) these do not amount to a safety issue."

Williams responded to a request for comment with a text message to The Journal, saying "quote my **Twitter feed**."

In a Twitter message, the pastor wrote, "I (hear) #flint city officials upset at my comparisons yesterday. They should use their anger 2 make sure resident aren't drinking death water."

In another message, Williams wrote, "Isn't it extreme to knowingly sell residents contaminated water people in #flint forced to buy liver disease water? What is that? #Genocide."

In addition to his work as president of NAN-Michigan, Williams is the pastor of King Solomon Baptist Church of Detroit.

This week was not Williams' first appearance in the spotlight in Flint.

In 2013, he demanded Hurley Medical Center officials answer charges that they granted a father's request that only white nurses care for his infant child.

The hospital eventually agreed to pay nearly $200,000 in total to three black nurses who sued the hospital after claiming they were discriminated against when they weren't allowed to treat that white baby.

NAN describes itself as one of the leading civil rights organizations in the nation with chapters throughout the United States. The organization was founded in 1991 by Sharpton.

*Ron Fonger is a reporter for The Flint Journal. Contact him at rfonger1@mlive.com or 810-247-9963. Follow him on **Twitter**, **Facebook** or **Google+**.*

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Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]cell

From: Muchmore, Dennis (GOV)
Sent: Wednesday, July 22, 2015 3:04 PM
To: Lyon, Nick (DCH)
Subject: Flint

I'm frustrated by the water issue in Flint. I really don't think people are getting the benefit of the doubt. Now they are concerned and rightfully so about the lead level studies they are receiving from the DEQ samples. Can you take a moment out of your impossible schedule to personally take a look at this? These folks are scared and worried about the health impacts and they are basically getting blown off by us (as a state we're just not sympathizing with their plight).

From: Muchmore, Dennis (GOV)
Sent: Wednesday, July 22, 2015 3:05 PM
To: Wyant, Dan (DEQ)
Cc: Hollins, Harvey (GOV)
Subject: Flint

I'm frustrated by the water issue in Flint. I really don't think people are getting the benefit of the doubt. Now they are concerned and rightfully so about the lead level studies they are receiving from the DEQ samples. Can you take a moment out of your impossible schedule to personally take a look at this? These folks are scared and worried about the health impacts and they are basically getting blown off by us (as a state we're just not sympathizing with their plight).

From: Muchmore, Dennis (GOV)
Sent: Friday, July 24, 2015 6:16 PM
To: Wurfel, Brad (DEQ); Saxton, Thomas (Treasury); Wyant, Dan (DEQ)
Cc: Hollins, Harvey (GOV)
Subject: RE: Need upate on lead / copper tests for Flint

Thanks.

From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 4:18 PM
To: Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Wyant, Dan (DEQ)
Subject: FW: Need upate on lead / copper tests for Flint

Guys, here's an update and some clarification on the lead situation in Flint. Please limit this information to internal for now.

By the tenants of the federal statute, the city is in compliance for lead and copper. That aside, they have not optimized their water treatment (for the most part, this means adding phosphates to minimize the degree that the water Ph mobilizes lead and copper in people's home plumbing).

Compliance with the standard started with testing. A June-December run of tests (all in homes with lead in their premise plumbing) concluded in December. Another January – June round of sampling concluded last month. Everything checks out in terms of compliance, but now the next step is optimizing the water supply.

So, In about two weeks, DEQ will be sending a formal communication about the optimizing issue. The federal program has long timelines for action. A community water supplier gets 18 months to study the options, and two years thereafter to implement water system optimization measures.

My point: Conceivably, by the time we're halfway through the first timeline, the city will begin using a new water source with KWA … and conceivably, the whole process starts all over again.

In terms of near-future issues, the bottom line is that residents of Flint do not need to worry about lead in their water supply, and DEQ's recent sampling does not indicate an eminent health threat from lead or copper. That said, anyone with lead pipes in their premise plumbing (this translates to tens of thousands of homes in our older urban centers, btw) should at least be aware that they have them, and to some limited degree that's going to impart minute parts per billion of lead in water no matter what. Its why nobody uses lead water pipes anymore.

The long version of this note is below. Let's connect next week. I'd like some thoughts about what more the state could be doing – most immediately, to convey the results of our testing and tell the story to the residents of Flint in an effort to quell some fears.
Thanks!
b

From: Busch, Stephen (DEQ)
Sent: Friday, July 24, 2015 3:46 PM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: Need upate on lead / copper tests for Flint

Brad,

As we discussed, the City has completed the last round of monitoring (Jan 1 – June 30, 2015). The last samples came in about a week ago. We have made the compliance determination that the 90th percentile level is 11 parts per billion, which is below the Action Level Standard of 15 parts per billion (there is no Lead maximum contaminant level standard). The federal rule requires measuring lead levels in water from household plumbing materials to determine the corrosivity of the City's water in order to limit exposure.

I have provided a summary of Flint's lead compliance monitoring from the last 20+ years since this regulation started in 1991. The City of Flint itself has never had a 90th percentile level exceed the 15 part per billion action level. Sampling requirements look at the worst case plumbing materials. Samples must be collected in accordance with the regulatory requirements and criteria in order to be used for compliance determinations.

Because the City of Flint serves a population of over 50,000 they are required to have Fully Optimized Corrosion Control. While it is possible to meet the fully optimized requirement without additional treatment, based on their two rounds of sampling since switching to the Flint River, we have determined they did not meet the eligibility for this per the regulation. They now have to complete a study (within 18 months) and are then allowed a period of additional time (2 additional years) to install the selected treatment for Fully Optimized Corrosion Control in accordance with the regulatory requirements. This is what DWSD was required to do back in 1993 – 1997 (see attached letter and study). We are planning to suggest the City directly submit a treatment process to shorten the timeline to achieve full optimization. This letter is currently being drafted but won't be ready to mail out for another week.

Liane and I had a conference call with EPA region V in Chicago on Tuesday to go over all of this and they are in support of these next steps with the City.

The matter will be potentially further complicated when the City switches over to water from the Karegnondi Water Authority next year to re-evaluate the continuing requirement to fully optimize corrosion control.

The DEQ recognizes that there is has been no level of lead exposure determined to be safe, but again the regulation was developed to optimize water corrosivity to limit exposure and the City is following the regulatory requirements.

Lead is not coming from the Flint River or the City's Water Treatment Plant or the public distribution system. It is from lead service lines into homes and from plumbing materials and fixtures within the private property of the household.

As watermains are replaced within the City lead services associated with that section of watermain would be replaced in order to reconnect to City water. This would also place burden on the homeowner to pay for having the service line re-plumbed. However, since 2000 only 16 miles of the City's 500 miles of watermain have been replaced as they did not have the financial means to do so.

Let us know if there are questions or you need any additional information.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator

Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 12:09 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ)
Subject: Need upate on lead / copper tests for Flint

Guys, the Flint Ministers met with the Governor's office again last week. They also brought along some folks from the community – a college prof and a GM engineer – who imparted that 80 water tests in Flint have shown high lead levels.

Could use an upate on the January / june testing results, as well as recap of the December testing numbers, and any overview you can offer to edify this conversation.
Call me or email today if possible. Thanks!
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

From: Muchmore, Dennis (GOV)
Sent: Wednesday, July 29, 2015 9:02 AM
To: 'Workman, Wayne (TREASURY)'; Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV); 'Hollins, Harvey (GOV)'
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: RE: Updated Memo on Water Coalition Questions - July 29

I think this information is very helpful. It will not answer the main question about the quality of the water (DEQ is working on that through Brad I believe), and the color and smell of the present water, but it does get us to the answers to the less subjective issues. Frankly, the only way the issues will be totally resolved is when the KWA comes on line and the water is perceived to be cleaner and healthier.
I am somewhat surprised that the leadership in Flint has not responded better to the community questions, which don't seem unreasonable at all. Seems like Harvey has a better network into some of the neighborhoods than the city does. The KWA PR department definitely needs to do some outreach or they're headed down the same road as DWSD. Do you know if they go out on a regular basis to the community and talk about the rates, costs, etc.?

From: Workman, Wayne (TREASURY)
Sent: Wednesday, July 29, 2015 8:36 AM
To: Muchmore, Dennis (GOV); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: FW: Updated Memo on Water Coalition Questions - July 29
Importance: High

All, Attached is a memo and water rate summary answering several of the questions raised by the Flint pastors. Please let me know if you have any questions. Wayne

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Cline, Richard (Treasury)
Sent: Wednesday, July 29, 2015 8:21 AM
To: Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury); Byrne, Randall (Treasury)
Subject: Updated Memo on Water Coalition Questions - July 29
Importance: High

Wayne,

Attached is the water rate table you asked for and I have updated the memo to reference this as an attachment.

If you need anything else, please let me know.

Note that Rob, Randy and I will be in Benton Harbor for a portion of today conducting their annual RTAB evaluation.

Eric Cline | Department Manager
State of Michigan | Michigan Department of Treasury | Office of Fiscal Responsibility

430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228
E-mail clinerl@michigan.gov

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From: Muchmore, Dennis (GOV)
Sent: Thursday, July 30, 2015 9:43 AM
To: Wurfel, Brad (DEQ)
Cc: Clement, Elizabeth (GOV); Hollins, Harvey (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: Flint Water Meeting

Can you join us with some Flint community leaders on Tuesday at 9:30 to talk about these water quality issues (probably need to bring your science guy)? Tom and Wayne will be there and Harvey and I promised these pastors we'd have real information for them and we do.

From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 11:52 AM
To: 'Lyon, Nick (DCH)'; Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH)
Subject: RE: Updated Memo on Water Coalition Questions - July 29

Can I reprint Nancy's email?

From: Lyon, Nick (DCH)
Sent: Friday, July 31, 2015 10:57 AM
To: Muchmore, Dennis (GOV); Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV); Grijalva, Nancy (DCH)
Subject: Re: Updated Memo on Water Coalition Questions - July 29

Our Public Health staff followed up a bit more on the lead question. Below is their email update to me.

From: Grijalva, Nancy (DCH)
Sent: Wednesday, July 29, 2015 11:23 AM
To: Lyon, Nick (DCH)
Subject: FW: Director's Office Assignment -- Flint - need update asap
FYI.....
-----Original Message-----
From: Peeler, Nancy (DCH)
Sent: Tuesday, July 28, 2015 2:57 PM
To: Anderson, Paula (DCH); Miller, Corinne (DCH); Travis, Rashmi (DCH); Moran, Susan (DCH); Grijalva, Nancy (DCH); Fink, Brenda (DCH)
Cc: Priem, Wesley F. (DCH); Dykema, Linda D. (DCH); Bouters, Janese (DCH); Barr, Jacqui (DCH)

Subject: RE: Director's Office Assignment -- Flint - need update asap

I apologize for the delay in responding more specifically to this assignment, it took some time to review our Childhood Lead Poisoning Prevention program data to see if it might contribute to the understanding of the situation in Flint with their water supply. Here is what we found:

We looked at lead testing results for May 2014-April 2015, which is the 12 month time frame just after Flint started drawing their water from the river (water source changed in April 2014).

We compared lead testing rates and lead testing results to the same time frame for the previous 3 years, to see if there were any patterns that suggested that there were increased rates of lead poisoning after the water supply was switched. Per the attached charts –

- Lead testing rates remained about the same from year to year (chart on the right).
- There was a spike in elevated blood lead tests from July-September 2014 (chart on the left, gold line).
- However that pattern was not terribly different from what we saw in the previous three years, especially in 2011-2012 (we are working with our Epidemiologist to statistically verify any significant differences).

- We commonly see a 'seasonal effect' with lead, related to people opening and closing windows more often in the summer, which disturbs old deteriorating paint on the windows, sills and sashes. Window fans frequently blow and spread the lead dust from the deteriorating paint to other parts of the room/house. We suspect that the summer data spike may be related to this effect.
- If the home water supply lines and/or river water were contributing to elevated blood lead tests, we expected that the increased rates would extend beyond the summer, but they drop quite a bit from September to October, stayed low over the winter, and are just starting to tail up again in the spring of 2015.

So upon review, we don't believe our data demonstrates an increase in lead poisoning rates that might be attributable to the change in water source for Flint. We recognize that lead exposure via the water is only a small piece of what may be happening for families in Flint, however, we hope the information is helpful.

Nancy Peeler

From: Muchmore, Dennis (GOV)
Sent: Wednesday, July 29, 2015 9:02 AM
To: Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV); Hollins, Harvey (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: RE: Updated Memo on Water Coalition Questions - July 29

I think this information is very helpful. It will not answer the main question about the quality of the water (DEQ is working on that through Brad I believe), and the color and smell of the present water, but it does get us to the answers to the less subjective issues. Frankly, the only way the issues will be totally resolved is when the KWA comes on line and the water is perceived to be cleaner and healthier.
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From: Workman, Wayne (TREASURY)
Sent: Wednesday, July 29, 2015 8:36 AM
To: Muchmore, Dennis (GOV); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Clement, Elizabeth (GOV)
Cc: Saxton, Thomas (Treasury); Wisniewski, Wendy (GOV)
Subject: FW: Updated Memo on Water Coalition Questions - July 29
Importance: High

All, Attached is a memo and water rate summary answering several of the questions raised by the Flint pastors. Please let me know if you have any questions. Wayne

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Cline, Richard (Treasury)
Sent: Wednesday, July 29, 2015 8:21 AM

To: Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury); Byrne, Randall (Treasury)
Subject: Updated Memo on Water Coalition Questions - July 29
Importance: High

Wayne,

Attached is the water rate table you asked for and I have updated the memo to reference this as an attachment.

If you need anything else, please let me know.

Note that Rob, Randy and I will be in Benton Harbor for a portion of today conducting their annual RTAB evaluation.

Eric Cline | Department Manager
State of Michigan | Michigan Department of Treasury | Office of Fiscal Responsibility
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | [redacted] | Traverse City Office (231) 922-5228
E-mail clinerl@michigan.gov

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, is for the sole use of the intended recipient(s) and may contain information that is confidential and protected from disclosure under the law. Any unauthorized review, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail, and delete/destroy all copies of the original message and attachments Thank you.

From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 4:10 PM
To: 'Wurfel, Brad (DEQ)'
Subject: RE: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Just be prepared for them not being satisfied. I'm not sure I blame them as that river has always been problematic.

-----Original Message-----
From: Wurfel, Brad (DEQ)
Sent: Monday, August 3, 2015 2:49 PM
To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Wurfel, Sara (GOV); Agen, Jarrod (GOV)
Cc: Clement, Elizabeth (GOV); Wyant, Dan (DEQ)
Subject: RE: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

That AP brief came from this Flint Journal story:
http://www.mlive.com/news/flint/index.ssf/2015/08/concerned_pastors_urge_flint_r.html#incart_river

Here's one that showcases the local clergy. I presume most of these folks will be with us tomorrow?
http://www.mlive.com/news/flint/index.ssf/2015/06/judge_says_flint_doesnt_have_t_1.html#incart_related_stories

Just had a pre-meet with Stephen Busch, our drinking water expert who oversees the staff regulating Flint. He's planning to bring some information on the history of the water / lead issue in Flint, as well as some data about the most recent statutorily required testing. He'll be able to discuss the state program (which implements the federal statute), what we've been doing by way of testing, what we're finding, and what residents should do if they have concerns.

Anything else anyone wants us to be prepared for?
b

-----Original Message-----
From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 11:55 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Agen, Jarrod (GOV)
Cc: Clement, Elizabeth (GOV)
Subject: FW: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Here's part of our on-going problem.

-----Original Message-----
From: do-not-reply@detroitnews.com [mailto:do-not-reply@detroitnews.com]
Sent: Monday, August 3, 2015 11:49 AM
To: Muchmore, Dennis (GOV)
Subject: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Message from: muchmored@michigan.gov

Flint pastors tell residents to get their water tested

Some area pastors held a rally Sunday to urge residents to get their tap water tested

Check out this story on detroitnews.com: http://detne.ws/1SAH1K6

From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 4:17 PM
To: 'Wurfel, Brad (DEQ)'
Subject: RE: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Yep, that's them. They haven't been too bad in private. I think they're just frustrated with the city and they aren't happy with the EM in the first place. We're working with them to get their complaints mostly spoken to, but the brown water makes it tough for them to get to home plate.

-----Original Message-----
From: Wurfel, Brad (DEQ)
Sent: Monday, August 3, 2015 2:49 PM
To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Wurfel, Sara (GOV); Agen, Jarrod (GOV)
Cc: Clement, Elizabeth (GOV); Wyant, Dan (DEQ)
Subject: RE: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

That AP brief came from this Flint Journal story:
http://www.mlive.com/news/flint/index.ssf/2015/08/concerned_pastors_urge_flint_r.html#incart_river

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Anything else anyone wants us to be prepared for?
b

-----Original Message-----
From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 11:55 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Hollins, Harvey (GOV); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Agen, Jarrod (GOV)
Cc: Clement, Elizabeth (GOV)
Subject: FW: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Here's part of our on-going problem.

-----Original Message-----
From: do-not-reply@detroitnews.com [mailto:do-not-reply@detroitnews.com]
Sent: Monday, August 3, 2015 11:49 AM
To: Muchmore, Dennis (GOV)
Subject: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Message from: muchmored@michigan.gov

Flint pastors tell residents to get their water tested

Some area pastors held a rally Sunday to urge residents to get their tap water tested

Check out this story on detroitnews.com: http://detne.ws/1SAH1K6

From: Muchmore, Dennis (GOV)
Sent: Monday, September 14, 2015 1:32 PM
To: Wurfel, Brad (DEQ); Pallone, Maggie (DEQ)
Subject: FW: PRESS RELEASE: Special Presentation to City Council on Water
Attachments: City Council Meeting Water Presentation 9.14.15.pdf

FYI. Is this your meeting?

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Monday, September 14, 2015 9:09 AM
Subject: PRESS RELEASE: Special Presentation to City Council on Water

For Immediate Release

Special Presentation to City Council on Water to be Included in City Council Meeting Agenda for Monday, September 14, 2015

Flint, Michigan – September 14, 2015 – The agenda for the regular City Council meeting scheduled for Monday, September 14, 2015 at 6:00pm will include a special presentation to update residents on water. The presentation will include the steps taken thus far to address the quality, safety and affordability of the water as well as upcoming plans to make improvements to the water system. This is a public meeting and residents are encouraged to attend.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted](Cell)
jlorenz@cityofflint.com

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
Cell: [redacted]
jlorenz@cityofflint.com

For Immediate Release

Special Presentation to City Council on Water to be Included in City Council Meeting Agenda for Monday, September 14, 2015

Flint, Michigan – September 14, 2015 – The agenda for the regular City Council meeting scheduled for Monday, September 14, 2015 at 6:00pm will include a special presentation to update residents on water. The presentation will include the steps taken thus far to address the quality, safety and affordability of the water as well as upcoming plans to make improvements to the water system. This is a public meeting and residents are encouraged to attend.

–END–

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 07, 2015 11:11 AM
To: Workman, Wayne (TREASURY); Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Wurfel, Brad (DEQ)
Subject: RE: How The Flint Water Crisis Emerged

I noted in one of the slides that the council voted 7-1 to move back to DWSD and Jerry is quoted as not being in favor of it. I think they left out his reasoning for that and that would have been nice.

From: Workman, Wayne (TREASURY)
Sent: Wednesday, October 7, 2015 10:40 AM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>
Subject: FW: How The Flint Water Crisis Emerged

Finally M Live recognizes that DWSD kicked Flint off the system.

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Widigan, Robert (TREASURY)
Sent: Wednesday, October 07, 2015 10:32 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>
Cc: Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>
Subject: FW: How The Flint Water Crisis Emerged

This article gives a very detailed and accurate timeline from when the city decided to stop buying water from DWSD to today.

-Rob

From: Widigan, Robert (TREASURY)
Sent: Wednesday, October 07, 2015 10:29 AM
To: Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov>; Cline, Richard (Treasury) <cliner1@michigan.gov>
Subject: How The Flint Water Crisis Emerged

The second slide identifies that Detroit terminated the contract with the city:
http://www.mlive.com/news/flint/index.ssf/2015/10/how_the_flint_water_crisis_eme.html#2

Robert Widigan
Local Government Financial Services Division
Michigan Department of Treasury
Office (517) 373-3227 Cell ([redacted]

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 9:07 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: Flint

A lot of complaints about Natasha these days. Of course, I have a lot of complaints about myself and this Flint thing. If I had acted more quickly on some of my minister's complaints we at least would have had a more robust discussion. Do we have a copy of the Veolia conclusions somewhere?

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 12:13 PM
To: Wurfel, Brad (DEQ)
Cc: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Krisztian, George (DEQ); Saxton, Thomas (Treasury); Howard Croft (hcroft@cityofflint.com); Lasher, Geralyn (DHHS)
Subject: Re: flint water

Be aware that the GCDC hasn't reached an agreement with GLWA to reconnect their transmission pipes. Lawyers are still talking.

Sent from my iPhone

On Oct 13, 2015, at 11:59 AM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> **Steve**, what's our role here and do we have an update to offer?
> **Howard**, wanted you looped into this request if you've got anything to add.
> **Tom**, heads up Fonger may be headed your way.
> **Geralyn**, same FYI.
> b
>
> ---
>
> **From:** Ronald Fonger [redacted]
> **Sent:** Tuesday, October 13, 2015 9:50 AM
> **To:** Wurfel, Brad (DEQ)
> **Subject:** flint water
>
> Hey Brad:
> Where is the DEQ at with approving Flint's activation of the sections of Flint and Genesee County transmission pipe? Howard Croft said yesterday that the city's line is disinfected and ready.
> Also, I made a note to expect the corrosion control plan this week. Any word on that?
> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> [redacted]
> email [redacted]
> address 540 S. Saginaw St. #101, Flint MI 48502

Message

From: Muchmore, Dennis (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MUCHMORED]
Sent: 11/5/2015 4:26:10 PM
To: Wurfel, Brad (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=b6f17684155b465697bd2b350f2eb914]; Saxton, Thomas (Treasury) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=5510c3cdf27f42dfb68ebdd7c7471e5b]; Wyant, Dan (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=57e17534bc6d44b990e757afc8d8799d]
Subject: Fwd: MEDIA ADVISORY: City Administrator Press Briefing

See subject matter

Sent from my iPhone

Begin forwarded message:
From: Jason Lorenz <jlorenz@cityofflint.com>
Date: November 4, 2015 at 6:37:21 PM EST
To: undisclosed-recipients:;
Subject: MEDIA ADVISORY: City Administrator Press Briefing

FOR PLANNING PURPOSES ONLY - NOT FOR DISTRIBUTION

MEDIA ADVISORY: City Administrator Press Briefing

WHEN: Thursday, November 5, 2015 at 10:30am

WHERE: Mayor's Office Conference Room, Flint City Hall

Details: Topics will include, but are not limited to, updates on water related matters.

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted] Cell)
jlorenz@cityofflint.com

From: Muchmore, Dennis (GOV)
Sent: Tuesday, December 15, 2015 12:12 PM
To: 'Workman, Wayne (TREASURY)'; Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Hollins, Harvey (GOV); Clement, Elizabeth (GOV); Stanton, Terry A. (Treasury); Sampson, Jeremy (TREASURY); Agen, Jarrod (GOV); Wurfel, Brad (DEQ)
Subject: RE: PRESS RELEASE- STATE OF EMERGENCY DECLARED

With the declaration apparently the Mayor is appealing for Fed help to Cong. Kildee. That seems reasonable.

From: Workman, Wayne (TREASURY)
Sent: Tuesday, December 15, 2015 10:32 AM
To: Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Clement, Elizabeth (GOV) <clemente@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Sampson, Jeremy (TREASURY) <SampsonJ@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>
Subject: FW: PRESS RELEASE- STATE OF EMERGENCY DECLARED

FYI

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Byrne, Randall (Treasury)
Sent: Tuesday, December 15, 2015 9:50 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>
Subject: FW: PRESS RELEASE- STATE OF EMERGENCY DECLARED

Wayne and Suzanne:

Mayor Weaver declared a State of Emergency in Flint last night. I have attached a copy for your review. Natasha tried to discourage her from proceeding on this. FYI, I am going to call the Mayor on the search. It doesn't sound like she wants to use Tom for the search.

Randy,

From: Natasha Henderson [mailto:nhenderson@cityofflint.com]
Sent: Tuesday, December 15, 2015 9:40 AM
To: Byrne, Randall (Treasury) <ByrneR1@michigan.gov>
Subject: Fwd: PRESS RELEASE- STATE OF EMERGENCY DECLARED

Thanks,

Natasha L. Henderson, City Administrator
1101 S. Saginaw St.
Flint, MI
Email: nhenderson@cityofflint.com
Phone: (810) 237-2057
www.cityofflint.com

---------- Forwarded message ----------
From: "Sean Kammer" <skammer@cityofflint.com>
Date: Dec 14, 2015 10:32 PM
Subject: PRESS RELEASE- STATE OF EMERGENCY DECLARED
To:
Cc:

Mayor Karen Weaver Declares State of Emergency

Flint, MI – December 14, 2015 – Mayor Karen Weaver has declared a State of Emergency in response to a man-made disaster caused by the City switching to the Flint River as a water source. This switch has resulted in elevated lead levels in drinking water which prompted both the City and the County Health department to issue a health advisory earlier this year.

Mayor Weaver states that this was one of the things she had promised to do while campaigning for mayor.

Declaring an emergency intends to help raise awareness of the issue that the water is still not safe to drink and activates the City's Emergency Support Plan in order to respond to the crisis.

On October 16 of this year, the City switched back to the Detroit Water and Sewerage Department as the source of water, however lead levels remain well above the federal action level of 15 parts per billion in many homes. Residents are advised to continue using water filters while long term solutions are being developed.

The Mayor will hold a press conference about the State of Emergency on Tuesday, December 15 at 2pm at City Hall.

END

--

Sean Kenneth Kammer, MPA
Assistant to the City Administrator
City of Flint, Michigan
1101 S. Saginaw St.
Flint, MI 48502
810-237-2025

Subject: Internal Flint Water Meeting
Location: Governor's Conference Room, 2nd Romney

Start: Wed 1/28/2015 10:00 AM
End: Wed 1/28/2015 11:00 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Posthumus, Dick (GOV)
Required Attendees: Clement, Elizabeth (GOV); Muchmore, Dennis (GOV); Walsh, John (GOV); Wisniewski, Wendy (GOV); Hall, Jean (GOV); Pleyte, Beth (Treasury); Saxton, Thomas (Treasury); Clayton, Stacie (GOV); Hollins, Harvey (GOV); Murray, David (GOV)

Attending:
Dick Posthumus
Dennis Muchmore
John Walsh
Beth Clement
Tom Saxton
Harvey Hollins
Dave Murray

Subject:	Mtg Flint Water Issues/other Concerns
Location:	Governor's Conference Room
Start:	Wed 1/28/2015 2:00 PM
End:	Wed 1/28/2015 3:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Posthumus, Dick (GOV)
Required Attendees:	Saxton, Thomas (Treasury); Pleyte, Beth (Treasury); Muchmore, Dennis (GOV); Wisniewski, Wendy (GOV); Clement, Elizabeth (GOV); Walsh, John (GOV); Hall, Jean (GOV)

Attending:
Jerry Ambrose
Tom Saxton
Dick Posthumus
Dennis Muchmore
Beth Clement
Sen Ananich
Andy Leavitt

Subject: DM/EC/HH/Wayne Workman/ Tom Saxton/ Ashley Gelisse RE: Flint Pastors Warn They'll Go To Court To Get City Off Flint River Water
Location: Governor's Conference Room, 2nd Floor Romney

Start: Tue 4/14/2015 11:00 AM
End: Tue 4/14/2015 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Muchmore, Dennis (GOV)
Required Attendees: Workman, Wayne (TREASURY); Saxton, Thomas (Treasury); Clement, Elizabeth (GOV); Hollins, Harvey (GOV); Gelisse, Ashley (TREASURY); Cousineau, Sara (Treasury); Pleyte, Beth (Treasury); Clayton, Stacie (GOV); Dempkowski, Angela (Treasury)

Attendees:
EC/DM/HH
Wayne Workman
Tom Saxton
Ashley Gelisse

From: Gelisse, Ashley (TREASURY)
Sent: Thursday, April 09, 2015 2:58 PM
To: Workman, Wayne (TREASURY); Muchmore, Dennis (GOV)
Cc: Saxton, Thomas (Treasury); Clement, Elizabeth (GOV); Hollins, Harvey (GOV); Cousineau, Sara (Treasury); Pleyte, Beth (Treasury); Wisniewski, Wendy (GOV); Stoken, Laura (GOV)
Subject: RE: Flint Pastors Warn They'll Go To Court To Get City Off Flint River Water

Wayne and I discussed this further. I think it would be good if this group could meet early next week to have another discussion on Flint.

The purpose of the meeting would be to discuss and finalize Flint RTAB members, and also to discuss the potential ramifications of Rep. Kildee's recommendation that the state forgive Flint's $22M water loan: http://www.mlive.com/news/flint/index.ssf/2015/04/kildee_asks_feds_about_forgive.html

If you agree, perhaps Wendy (or Laura, in her absence) and Beth can help us find some time. Thanks much.

Ashley

From: Workman, Wayne (TREASURY)
Sent: Wednesday, April 08, 2015 6:40 PM
To: Muchmore, Dennis (GOV)
Cc: Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Gelisse, Ashley (TREASURY); Clement, Elizabeth (GOV);

Hollins, Harvey (GOV)
Subject: Re: Flint Pastors Warn They'll Go To Court To Get City Off Flint River Water

It is timely to figure that out, because what they is not affordable and they are ignoring the new improvements announced today.

Sent from my iPad

On Apr 8, 2015, at 5:27 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

Why not, we haven't anything else to do except spend our time chasing our tail. This issue isn't going to go away until we do some serious comms work in the city.

From: Workman, Wayne (TREASURY)
Sent: Wednesday, April 08, 2015 5:13 PM
To: Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Gelisse, Ashley (TREASURY); Muchmore, Dennis (GOV); Clement, Elizabeth (GOV)
Subject: Fwd: Flint Pastors Warn They'll Go To Court To Get City Off Flint River Water

FYI

Sent from my iPhone

Begin forwarded message:

From: "Koryzno, Edward (Treasury)" <KoryznoE@michigan.gov>
Date: April 8, 2015 at 4:35:47 PM EDT
To: "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>, "Gelisse, Ashley (TREASURY)" <GelisseA@michigan.gov>
Subject: FW: Flint Pastors Warn They'll Go To Court To Get City Off Flint River Water

FYI

Edward B. Koryzno, Jr. | Director - Bureau of Local Government Services
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
KoryznoE@michigan.gov

Think Green! Don't print this e-mail unless you need to.

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Thank you

From: Widigan, Robert (TREASURY)
Sent: Wednesday, April 08, 2015 4:12 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Cline, Richard (Treasury); Vandegrift, Drew (TREASURY)
Subject: Flint Pastors Warn They'll Go To Court To Get City Off Flint River Water
Importance: Low

FYI – http://videos.mlive.com/mlive/2015/04/flint_pastors_warn_theyll_go_t.html

Robert Widigan | Office of Fiscal Responsibility
State of Michigan | Department of Treasury
430 W. Allegan Street | Lansing, MI 48922
Office (517) 335-2130 | Cell ([redacted]
WidiganR@michigan.gov

From: Muchmore, Dennis (GOV)
Sent: Tuesday, March 03, 2015 7:46 AM
To: Workman, Wayne (TREASURY)
Subject: Re: Contaminated Drink Water if Flint

Meijer probably buys and repackages from Ice Mountain or Absopure (of course it could be from a local source). I just think it is prudent to have a Plan B if it gets out of hand. Seems like that's where some of the ministers could be particularly helpful if they want to be. You, Beth and Harvey are the best thinkers we've got and closest to the situation so your judgment makes sense. Jerry Ambrose has dealt with these kinds of things a zillion times in Lansing with Rev. Stone here so he's had experience. I just don't want it to get away from us so that when it turns warmer they create a crisis.

> On Mar 3, 2015, at 6:42 AM, Workman, Wayne (TREASURY) <WorkmanW@michigan.gov> wrote:
>
> I was going to call Mark Murray as a start. Do you have any water contacts at Ice Mtn etc i can call?
>
>
> Sent from my iPhone
>
>> On Mar 2, 2015, at 11:56 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>>
>> Might want to get Jarrod and Terry Stanton on this as well as Harvey. Otherwise it will get out of hand. It's in the city's long term interest to make the KWA work and we can make the river water safe, but we need to work with the ministers this week to help them out. It's tough for everyday people to listen to financial issues and water mumbo jumbo when all they see is problems. You can't expect the ministers to hold the tide on this problem.
>>
>> How about cutting a deal with Ice Mountain or Bill Young and buying some water for the people for a time? $250K buys a lot of drinking water and we could distribute it through the churches while we continue to make the water even safer.
>>
>> If we procrastinate much longer in doing something direct we'll have real trouble.
>>
>> Sent from my iPhone
>>
>> Begin forwarded message:
>>
>> From: Kelly Rossman-McKinney
>> <krossman@truscottrossman.com<mailto:krossman@truscottrossman.com>>
>> Date: March 2, 2015 at 8:26:34 AM EST
>> To: Dennis Muchmore
>> <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>
>> Subject: FW: Contaminated Drink Water if Flint
>>
>> Please call me so we can discuss. This issue is out of hand. We do pro bono work for the city on an as-needed basis, plus we also work for Veolia, the water consultant they brought on board. I'm concerned about the implications that this may have racial overtones. Ugh.
>>

>> [https://sites.google.com/a/truscottrossman.com/oct17/home/email-logo
>> .png]
>>
>>
>> Kelly Rossman-McKinney
>> CEO
>> Truscott Rossman •
>> truscottrossman.com<http://www.truscottrossman.com/>
>> Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
>> 200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
>> 125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503
>>
>> Cell: [redacted]
>> Office: (517) 487-9320
>> Fax: (517) 487-5080
>>
>>
>>
>> From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
>> Sent: Monday, March 02, 2015 7:36 AM
>> To: Kelly Rossman-McKinney
>> Subject: Fwd: Contaminated Drink Water if Flint
>>
>>
>> Welcome to Monday. Please advise asap as to any next steps you recommend, if any.
>> ---------- Forwarded message ----------
>> From: "Dayne Walling"
>> <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>
>> Date: Mar 2, 2015 7:29 AM
>> Subject: Fwd: Contaminated Drink Water if Flint
>> To: "Gerald Ambrose"
>> <gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>, "Natasha
>> Henderson"
>> <nhenderson@cityofflint.com<mailto:nhenderson@cityofflint.com>>,
>> "Peter Bade" <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>
>> Cc:
>>
>> FYI:
>> ---------- Forwarded message ----------
>> From: [redacted]
>> Date: Sat, Feb 28, 2015 at 2:09 PM
>> Subject: Contaminated Drink Water if Flint
>> To: "randall@udayton.edc<mailto:randall@udayton.edc>"
>> <randall@udayton.edc<mailto:randall@udayton.edc>>
>> Cc: "mail103@foxtv.com<mailto:mail103@foxtv.com>"
>> <mail103@foxtv.com<mailto:mail103@foxtv.com>>, WFLT 1420 Am
>> <wflt1420am@aol.com<mailto:wflt1420am@aol.com>>, Abc12news
>> <abc12news@abc12.com<mailto:abc12news@abc12.com>>, Wnem Desk
>> <wnem@wnem.com<mailto:wnem@wnem.com>>, [redacted]
>> [redacted]
>> "news@wjr.com<mailto:news@wjr.com>"
>> <news@wjr.com<mailto:news@wjr.com>>,

>> "assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>"
>> <assigmentdesk@wdiv.com<mailto:assigmentdesk@wdiv.com>>, "D. Adams"
>> [redacted]
>> fox2newsdesk@foxtv.com<mailto:fox2newsdesk@foxtv.com>,
>> [redacted]
>> [redacted]
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>> "wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>"
>> <wxyzdesk@wxyz.com<mailto:wxyzdesk@wxyz.com>>,
>> "wflt1420@aol.com<mailto:wflt1420@aol.com>"
>> <wflt1420@aol.com<mailto:wflt1420@aol.com>>,
>> "cspacouriernews@yahoo.com<mailto:cspacouriernews@yahoo.com>"
>> <cspacouriernews@yahoo.com<mailto:cspacouriernews@yahoo.com>>,
>> [redacted]
>> [redacted]
>> "promotion@wsmh.com<mailto:promotion@wsmh.com>"
>> <promotion@wsmh.com<mailto:promotion@wsmh.com>>, Eric Mays
>> <emays@cityofflint.com<mailto:emays@cityofflint.com>>, Emergency
>> Manager <em@cityofflint.com<mailto:em@cityofflint.com>>, [redacted]
>> [redacted]
>> [redacted]
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>> [redacted]
>> [redacted]
>>,
>> Vicky Van Buren
>> <vvanburen@cityofflint.com<mailto:vvanburen@cityofflint.com>>, Jackie
>> Poplar <jpoplar@cityofflint.com<mailto:jpoplar@cityofflint.com>>,
>> [redacted]
>> [redacted]
>> Wantwaz Davis
>> <wdavis@cityofflint.com<mailto:wdavis@cityofflint.com>>, [redacted]
>> [redacted]
>> "hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>"
>> <hwinford@cityofflint.com<mailto:hwinford@cityofflint.com>>, Inez
>> Brown <ibrown@cityofflint.com<mailto:ibrown@cityofflint.com>>, Peter
>> Bade <pbade@cityofflint.com<mailto:pbade@cityofflint.com>>,
>> "knelson@cityofflint.com<mailto:knelson@cityofflint.com>"
>> <knelson@cityofflint.com<mailto:knelson@cityofflint.com>>, [redacted]
>> [redacted]
> [redacted]
> [redacted] Scott Kincaid
>> <skincaid@cityofflint.com<mailto:skincaid@cityofflint.com>>, [redacted]
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>> [redacted]
> [redacted] Dyane Walling
>> <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>, [redacted]
>> [redacted]
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>> [redacted]
>> [redacted]
>> [redacted]
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>> [redacted]
>>
>> Good Afternoon, Attorney Randall!
>>
>> Thank you for returning my call on the other day! Again, my concern as is others in the City of Flint, Michigan regarding the drinking water source for the water customers of the City of Flint. I have enclosed one of the lasted article written by the local newspaper, "The Flint Journal" regarding the Flint River water. Needless to say, the water is dangerous to our health! GM will not use the water at its Engine Plant in Flint to wash engines parts!
>>
>> We need your help to guide us to the profession people that know about "Bad Drinking Water and Environmental Racism". I truly believe it's "Environmental Racism" at its worst or should I say best! As a resident of flint, Past President of the Flint Branch NAACP, newly elected VP of the Flint Branch NAACP and the most listen to broadcast host during that time on Flint's premiere gospel station, WFLT 1420AM, each Saturday morning from 9:30-10AM, I have challenged our elected officials to step up to the plate and fix this water problem!
>>
>> I'll be asking the Executive Committee of the Flint Branch of the NAACP to request from our National Office if we can proceed with a possible "Environmental Racism" lawsuit with their assistance and the assistance of other civil rights groups and others to "file briefs in support of our efforts against those parties involved with the changing and the using of the Flint River as our water drinking source.
>>
>> The City of Flint has Emergency Manager #4 since our "takeover", and cares less about the residents or the water concerns of its Customers of Flint! Please help us with our problem by directing us to the right professional people. Please go to www.actionpa.org/fluroride/ej.html<http://www.actionpa.org/fluroride/ej.html> regarding "Environmental Racism" I have attached an article from the Flint Journal, and may Google other articles regarding the Flint's water source, including how we arrived to where we are on today.
>>
>> Thank you very much in advance!!
>>
>> I remain.
>>
>> [redacted] Concerned Resident
>>
>>

>>
>> --
>> Dayne Walling
>> Mayor, City of Flint
>> City Hall, 1101 S. Saginaw St.
>> Flint, MI 48502
>> 810-766-7346
>> mayor@cityofflint.com<mailto:mayor@cityofflint.com>
>> www.cityofflint.com<http://www.cityofflint.com/>
>> follow me on twitter at http://twitter.com/mayorwalling
>> <CCF02282015_0002.pdf>

Dennis and Beth Priority Project List

Project Number	Owner (DM, BC or both)	Project Name	Project Summary	Current Status	Overall Status Description (G, Y, R or Complete)	Gov Priority (G) or Other (O)	Priority Level (A, B, or C)	Type of Issue (State, SE Michigan, Internal)	Start Date	Target Completion Date	Lead Department if Applicable
1	DM	Five step building move						State			
2	DM	Overall gaming plan						State			
3	DM	Tribal compacts						State			
4	DM	on-line lottery						State			
5	DM	AWD for horse racing						State			
6	DM	charitable gaming						State			
7	DM	Bakken Crude Rail issues						State			
8	DM	Speed limits in the UP						State			
9	DM	Aramark						State			
10	DM	Benton Harbor schools						State			
11	DM	Future of Film Credits						State			
12	DM	PSC complaints						State			
13	DM	Capitol Commons lease						State			
14	DM	MichiganPrescription Drug Taskforce						State			
15	DM	Pontiac studio plan						State			
16	DM	Agriculture labor shortage project						State			
17	DM	Dow Corning issue						State			
18	DM	Chance for Life program						State			
19	DM	Maxey closure						State			
20	DM	Dewpoint issue						State			
21	DM	Ciena/CON amendments						State			
22	DM	Medicaid RFP						State			
23	DM	Future of the State Board of Ed vis-a-vis MDOE						State			
24	DM	Flint water issues						State			
25	DM	Liquor stores and gas pumps						State			
26	DM	Kellogg/BCTGM dispute						State			
27	DM	DoD project in Battle Creek						State			
28	DM	Ballot issues in 2016						State			
29	DM	civil service reform						State			
30	DM	Indiana Michigan Boundary issue						State			
31	DM	Battle Creek/Roberval,Quebec sister city project						State			
32	DM	Health Endowment Fund						State			
33	DM	OPG nuke storage						State			
34	DM	State office audits						State			
35	DM	MACPA Task Force Initiatives						State			
36	DM	Governor's Environmental priorities						State			
37	DM	Israel business bridge						State			
38	DM	Detroit Metro accelerated rail line						SE Michigan			
39	DM	GTW Allen and Van Horn Road Crossings						SE Michigan			
40	DM	Rail tunnel						SE Michigan			
41	DM	Utica/MEDC issue						SE Michigan			
42	DM	RTA vote						SE Michigan			
43	DM	Northville Township issue with Scott						SE Michigan			
44	DM	Plymouth Township issue with DeHOCO						SE Michigan			
45	DM	NITC						SE Michigan			
46	DM	Wayne County						SE Michigan			
47	DM	Mound Road						SE Michigan			
48	DM	New Mound Road court building						SE Michigan			
49	DM	Integration of county workers into Cadillac						SE Michigan			
50	DM	HP school transition						SE Michigan			
51	DM	HP dissolution						SE Michigan			
52	DM	HP building merger						SE Michigan			
53	DM	Cadillac Place expansion						SE Michigan			
54	DM	Detroit						SE Michigan			

55	DM	Integration of city workers into Cadillac						SE Michigan			
56	DM	Riverside Park						SE Michigan			
57	DM	Belle Isle Conservancy project						SE Michigan			
58	DM	Fairgrounds						SE Michigan			
59	DM	DPS						SE Michigan			
60	DM	Randolph Center						SE Michigan			
61	DM	NGA						SE Michigan			
62	DM	RGA						SE Michigan			
63	DM	litigation funding						Internal			
64	DM	OUMI funding						Internal			
65	DM	controls on funds						Internal			
66	DM	Governor's residence costs						Internal			
67	DM	Pandas						Internal			
68	DM	Jobs for Scott and Nancy						Internal			
69	DM	501 c 4						Internal			
70	DM	MMF						Internal			
71	DM	Making Michigan Accountable						Internal			
72	DM	Political Director						Internal			
73	DM	Mackinac Conference rebuttals						Internal			
74	DM	MGA/RIC committee						Internal			
75	DM	Governor's Club board replacement						Internal			
76	DM	Appointments						Internal			

	Project Count
CLOSED - Normal	16
CLOSED - Incomplete	4

	Project Count
YELLOW	1
GREEN	3
CLOSED - Normal	16
CLOSED - Incomplete	1

	Project Count
YELLOW	2
RED	2
GREEN	20
CLOSED - Normal	18
CLOSED - Modified	1
CLOSED - Incomplete	3

	Project Count
YELLOW	1

	Project Count
YELLOW	6
GREEN	9
CLOSED - Normal	8
CLOSED - Modified	1
CLOSED - Incomplete	5

	Project Count
GREEN	1

	Project Count
YELLOW	4
RED	1
GREEN	5
CLOSED - Normal	3

	Project Count
YELLOW	1
GREEN	19
CLOSED - Normal	12
CLOSED - Modified	2
CLOSED - Incomplete	2

	Project Count
YELLOW	3
GREEN	25
CLOSED - Normal	15

	Project Count
CLOSED - Normal	1

	Project Count
CLOSED - Normal	1

	Project Count
CLOSED - Normal	7
CLOSED - Modified	1
CLOSED - Incomplete	1

	Project Count
GREEN	1

	Project Count
YELLOW	1
GREEN	1
CLOSED - Normal	3

	Project Count
GREEN	9
CLOSED - Incomplete	1

	Project Count
GREEN	1
CLOSED - Normal	4

	Project Count
CLOSED - Normal	1

	Project Count
CLOSED - Incomplete	17
CLOSED - Modified	5
CLOSED - Normal	104
GREEN	94
RED	3
YELLOW	19

	Project Count
CLOSED - Normal	2
GREEN	2
YELLOW	2

	Project Count
CLOSED - Normal	1

	Project Count
CLOSED - Modified	1
CLOSED - Normal	10
GREEN	13

	Project Count
CLOSED - Normal	1
GREEN	2

	Project Count
CLOSED - Incomplete	3
CLOSED - Normal	4
YELLOW	1

	Project Count
CLOSED - Normal	9
GREEN	8
RED	1
YELLOW	1

	Project Count
CLOSED - Normal	1

	Project Count
CLOSED - Incomplete	2
CLOSED - Normal	12
GREEN	3
YELLOW	1

	Project Count
CLOSED - Normal	4
GREEN	7

	Project Count
CLOSED - Incomplete	2
CLOSED - Modified	2
CLOSED - Normal	28
GREEN	30
RED	2
YELLOW	4

	Project Count
GREEN	1

	Project Count
CLOSED - Incomplete	1
CLOSED - Modified	1
CLOSED - Normal	3
GREEN	3
YELLOW	1

	Project Count
CLOSED - Incomplete	2
CLOSED - Normal	14
GREEN	2
YELLOW	1

	Project Count
CLOSED - Normal	1
GREEN	1
YELLOW	1

	Project Count
CLOSED - Normal	2
GREEN	5
YELLOW	1

	Project Count
CLOSED - Modified	1
CLOSED - Normal	5
GREEN	7

	Project Count
CLOSED - Incomplete	1
CLOSED - Normal	2
GREEN	4

	Project Count
CLOSED - Incomplete	6
CLOSED - Normal	8
GREEN	6
YELLOW	6

	Project Count
CLOSED - Normal	1

From: Muchmore, Dennis (GOV)
Sent: Wednesday, September 23, 2015 1:25 PM
To: Clement, Elizabeth (GOV)
Subject: Andy Leavitt

Don't forget to call andy about the supposed Flint chase and also talk about the DHHS and the controversy with lead based blood samples allegedly from water.

From: Lyon, Nick (DHHS)
Sent: Thursday, December 03, 2015 10:54 AM
To: Baird, Richard (GOV); Clement, Elizabeth (GOV)
Subject: FW: Flint Lead information
Attachments: Flint Lead MDHHS Sitrep 11_30_15.docx; Flint Lead MDHHS Sitrep 12 1_15.docx

FYI. These are the regular reports I am now receiving.

Michigan Department of Health and Human Services Environmental Health

Flint Water Lead Project

MDHHS Situation Report

****NOTE: Contains potentially Identifiable Information- REDACT AS INDICATED****

New items for the day listed first and in bold print.

Daily Briefing and Situation Report

Date: November 30, 2015

Surveillance Indicators: People Tested since 10/1/2015: 1,361;

- Children less than 6 years old ≥ 5 µg/dl since 10/1/2015: 15
- Children 6 to 17 years old ≥ 5 µg/dl since 10/1/2015: 6
- Adults 18 years and older ≥ 5 µg/dl since 10/1/2015: 9

Severity Indicators: Hospitalized/Discharged-1/1; Deaths- 0

DAILY ACTIVITY SUMMARY

Elevated Blood Level (EBL) Environmental Investigations – Wes Priem, Courtney Wisinski

- **Contractor (ETC) has 8 investigations scheduled.**
- **The high EBLL home is scheduled for Friday 12/4/15.**
- DEH-Finalized residential tap water sampling protocol used to evaluate lead concentrations in households
- Contractor (ETC) has completed 1 EBL investigation, but will have to return for water sampling.

MDHHS/Genesee County Health Department (GCHD) Case Management (CM) Services

- No additional updates for 11/30/15
- Week Ending 11/20/15:
    - Number of contacts attempted: 58
    - Contacted and offered case management: 13
- DEH staff developing case management and EBL investigation database
    - compiles blood test results, case management services, and environmental sampling data for each Flint child with elevated blood lead level

Epidemiology/Surveillance – Patti McKane, Martha Stanbury

- **Completed re-evaluation of blood lead testing data from 1/1/2010 to current per the request of the Governor's office. Counts for 10/10/2015 will vary slightly from previously reported because of the change in de-duplication procedures to accommodate yearly counts.**
- **Draft Blood Lead Data report completed and conveyed to Eden Wells, Corinne Miller and Angela Minicuci.**
- Some problems were experienced in accessing all the laboratory electronic data files going back to last week's submissions over the holiday. Most were resolved with help from DTMB, and the

rest should be resolved tomorrow morning. As a result, no daily report was created of newly reported individuals with BLL>20files but we will have this tomorrow.

- 1 child hospitalized 11/18-11/20, <2 yo, identified by lab who contacted primary provider with elevated blood lead level of 52 mcg/dl; hospitalized at Children's 11/18; follow-up tests decreased without need for chelation- discharged to home 11/20.
    - GCHD follow-up 11/23 and 11/24- case management and investigation in process- possible history of lead paint ingestion
    - Child with history of anemia.
    - Other children in household tested, also followed by PCP.

Communications/Information Sharing

- MDHHS/GCHD weekly call Nov 24 3PM- reviewed progress on case management and EBL testing
- Technical Advisory Committee meeting originally scheduled for December 9th- , then postponed by City of Flint, may actually take place: awaiting word from City.

Health Education Resources Updates - Kory Groetsch (stand-in for Michelle Bruneau)

- Bathing-specific fact sheet under development.
- DEH has drafted a phosphate fact sheet, reviewing/revising with DEQ Drinking Water Staff
- DEH working with CLPPP and GCHD to revise parent resources package to reduce reading level.

Toxicology - Kory Groetsch, Jennifer Gray

- Developing Access database to track services provided to EBL children. Meeting held with other DEH staff to begin design.

WIC

- No additional updates for 11/30/15
- Letter sent 11/24 to GCHD about Ready-to-feed formula availability from WIC program
- Talking points for WIC staff and for providers shared

Healthcare/Providers

- No additional updates for 11/30/15
- Forum for primary care providers in Flint by public health being planned- 2nd – 3rd week December
- WIC information to be shared by GCHD to providers

DEQ Information - Linda Dykema as Liaison

- **MDEQ would like to issue school drinking water testing results in coordination with MDHHS release of the blood lead test reporting.**

Flint Water Lead Project

Michigan Department of Health and Human Services
Situation Report for December 1, 2015

****NOTE: Contains potentially Identifiable Information- REDACT AS INDICATED****
New items for the day listed first and in bold print.

Daily Briefing and Situation Report prepared by Linda Dykema

Surveillance Indicators: People Tested since 10/1/2015: 1,361;

Children less than 6 years old ≥ 5 µg/dl since 10/1/2015: 15

Children 6 to 17 years old ≥ 5 µg/dl since 10/1/2015: 6

Adults 18 years and older ≥ 5 µg/dl since 10/1/2015: 9

Severity Indicators: Hospitalized/Discharged-1/1; Deaths- 0

DAILY ACTIVITY SUMMARY

Elevated Blood Level (EBL) Environmental Investigations – ETC Contractors, Wes Priem, Courtney Wisinski

- **2 EBL investigations completed.**
- 8 investigations scheduled.
- The high EBLL home is scheduled for Friday 12/4/15.

MDHHS/Genesee County Health Department (GCHD) Case Management (CM) Services – Nancy Peeler

- **CM report through 11/25/15:**
  - **# of contacts attempted: 136**
  - **# offered CM: 46**
  - **# CM started: 5**
  - **# of children receiving CM who live in Flint: 5**
  - **# billed to Medicaid: 5**
  - **# Other disposition: 2 (2 children moved to Oakland County)**

- **Held call with GCHD staff to clarify and resolve questions about the CM budget. The revised budget will be submitted in eGrams on or about 12/7/15.**

- **Held weekly status call with CM staff at GCHD:**
  - **Need to include developmental screening as part of the CM protocol, and need to share screening results with Early On when a referral is made;**

Epidemiology/Surveillance – Patti McKane, Martha Stanbury, Bob Scott, Jessica Cooper

- Completed re-evaluation of blood lead testing data from 1/1/2010 to current per the request of the Governor's office.
- Revised Draft Blood Lead Data report completed.
- 1 child hospitalized 11/18-11/20, <2 years old, identified by lab who contacted primary provider with elevated blood lead level of 52 µg/dl; hospitalized at Children's 11/18; follow-up tests decreased without need for chelation- discharged to home 11/20.

- GCHD follow-up 11/23 and 11/24- case management and investigation in process- possible history of lead paint ingestion
- Child with history of anemia.
- Other children in household tested, also followed by PCP.

Communications/Information Sharing – Linda Dykema, Eden Wells

- **Weekly (Tues. 8:00 am) coordination call with DEQ/LARA/HHS. Discussed need for informational materials for schools/residents regarding lead free plumbing replacements.**
- MDHHS/GCHD weekly call Nov 24 3PM- reviewed progress on case management and EBL testing
- Technical Advisory Committee meeting originally scheduled for December 9th- , then postponed by City of Flint, may actually take place: awaiting word from City.

Health Education Resources Updates - Michelle Bruneau, Emily Houk

- **Revising Phosphate fact sheet. Will discuss with DEQ Drinking Water staff on 12/2/15**
- Bathing-specific fact sheet under development.
- DEH working with CLPPP and GCHD to revise parent resources package to reduce reading level.
- Working with Healthy Homes Section staff to revise EBL report for Flint Residents.

Toxicology - Kory Groetsch, Jennifer Gray, Lisa Quiggle

- **Working with GCHD and DEQ to address questions concerning impact of phosphate treatment on drinking water filters.**
- **Working with Healthy Homes Section staff to revise EBL report for Flint Residents.**

WIC

- No additional updates for 12/1/15
- Letter sent 11/24 to GCHD about Ready-to-feed formula availability from WIC program
- Talking points for WIC staff and for providers shared

Healthcare/Providers

- **Forum for primary care providers in Flint POSTPONED pending coordination with local providers**
- WIC information to be shared by GCHD to providers

DEQ Information - Linda Dykema as Liaison

- MDEQ would like to issue school drinking water testing results in coordination with MDHHS release of the blood lead test reporting.

From: Lyon, Nick (DHHS)
Sent: Monday, December 21, 2015 3:45 PM
To: Clement, Elizabeth (GOV)
Subject: Fwd: article

Begin forwarded message:

From: "Grijalva, Nancy (DHHS)" <GrijalvaN@michigan.gov>
Date: December 21, 2015 at 12:18:48 PM EST
To: "Lyon, Nick (DHHS)" <LyonN2@michigan.gov>
Subject: article

Michigan Health Department Hid Evidence of Health Harm Due to Lead Contaminated Water: Allowed False Public Assurances by MDEQ and Stonewalled Outside Researchers

December 21, 2015 Siddhartha Roy Articles

After missing warning signs of spiking childhood lead poisoning that occurred a few months after switching to a corrosive river water source in 2014, outside pressure forced officials at the Michigan Department of Health and Human Services (DHHS) to closely scrutinize their data in July 2015. They discovered scientifically conclusive evidence of an anomalous increase in childhood lead poisoning summer 2014 immediately after the switch in water sources, but stood by silently as MDEQ officials repeatedly and falsely stated that no spike in blood lead levels (BLL) of children had occurred. DHHS employees later stonewalled efforts by outside researchers who questioned MDEQs statements, withheld damning documents but released incomplete data suggesting that there were no problems—DHHS officials ultimately fessed up only after incidence of childhood lead poisoning skyrocketed **above 10% in the two Flint zip codes with highest water lead risk during summer 2015**!

DHHS Pressured to Examine Data in mid-July 2015

DHHS' engagement in the Flint water crisis, started in early 2015 with two phone calls from Lee-Anne Walters to a state lead poisoning nurse in Lansing identified only as "Karen." When asked about the phone call last night, Walters said she was at first expressing concern over high water lead measurements in Flint, but on the second call she was in tears because her son's blood lead had increased to 6.5 ug/dL.

According to Walters, "Karen" stated that ***"He is barely lead poisoned. If CDC had not changed their lead poisoning standard from 10 down to 5, we would not be having this conversation."*** Angry, Walters protested that Karen was minimizing the problem, at which point "Karen" cut her off and said ***"I am working with kids in their 40's and 50's. It is just a few IQ points...it is not the end of the world."*** FOIA e-mails demonstrate that Karen Lishinski (DHHS) acknowledged receiving phone calls on the dates Walters called (the caller's name is redacted in the FOIA), but elsewhere Lishinski acknowledges to colleagues that the last time she actually worked with a child who had blood lead above 45 ug/dL was in 2009.

The next time the Flint water issue was apparently raised at DHHS, was July 23rd, when Linda Dkykema (DCH) sent out an e-mail titled "***R.E.Director's Office Assignment- Flint- need update ASAP***" on the heels of the memo written by EPA's Miguel Del Toral.

Misinformed from the Outset: MDEQ Garbage-in All but Ensures DHHS Garbage-out

The Director's Office update was tainted and probably doomed from the start, because Dykema logically reached out to MDEQ's Steve Busch for background who provided her the following insights:

"The city of Flint recently conducted drinking water testing throughout the city with special attention to those areas known to have old service lines. The city water supply is in compliance with the lead rule....DEQ has not seen a change in the city's compliance with the lead rule since switching to the Flint River source....Regarding the home with high drinking water lead levels: some years ago the supply line that serves the neighborhood was replaced, but somehow this house was not connected to the new line, such that the

family's drinking water supply was coming from the old corroded lead pipe. None of the neighbors water had elevated lead level... Regarding the EPA drinking water official quoted in the press articles: the report that he issued was a result of his own research and was not reviewed or approved by EPA management. He has essentially acted outside his authority."

In other words, Dykema and DHHS started out their investigation with demonstrably false MDEQ talking points as assumptions. Nonetheless, a team of researchers proceeded to examine their data for possible increased incidence of lead poisoning in Flint's children after the water switch.

Anomalous Increase in Lead Poisoning Noted—But False Conclusion Provided Publicly by MDEQ

The DHHS team immediately found evidence of a problem. Specifically, in the summer months of July, August and September of 2014 immediately after the switch, blood lead levels in Flint had been much higher than normal. On July 27th of 2015, an e-mail asked "can you quickly run any tests to see if the difference in the first graph is statistically significant," and the result quickly came back that it was. The team tried to re-run the data adding extra years to see if it changed the conclusions, but it did not because "there does appear to be a higher proportion of EBLL <lead poisoning> last summer than usual."

A July 28th e-mail summarized the exercise by noting "***This doesn't say anything about causality, but it does warrant further investigation*** " and a two page memo was created for the Director's Office (see excerpt Figure 1). The "***quick detection of abnormal variation***" in July, warranting further investigation, does not seem to have gone any further, and the study results did not seen the light of day until this FOIA request.

However, MDEQ's Brad Wurfel did publicly begin stating that study had been done, and using the results for public relations purposes as early as September 6th, 2015. Ironically, it was used to discredit data on high lead in water collected by Virginia Tech:

"....state officials are questioning the Virginia Tech findings. "The samples don't match the testing that we've

been doing in the same kind of neighborhoods all over the city for the past year," says Brad Wurfel, a state Department of Environmental Quality spokesman. Wurfel says DEQ has conducted two rounds of testing in the past year. He adds that the Department of Community Health conducts its own blood level lead testing in Flint. "With these kind of numbers," Wurfel says, "we would have expected to be seeing a spike somewhere else in the other lead monitoring that goes on in the community."

In other words, Wurfel was completely misrepresenting the conclusions of the DHHS July 2015 blood lead study—to claim there was no spike in children's blood lead when there was one. The FOIA does not reveal precisely where, or how, Wurfel was so misinformed. But the record is also perfectly clear that DHHS sat silently by as Wurfel repeated the false statements throughout the month of September.

RESULTS:

- Figure 2 shows that—on average—there appears to be a hig EBLL during the summer months of July, August, and Septer
- However, even compared to the previous three years, the pr highest during summer 2014 (Figure 2).
- Based on the control chart for proportions (Figure 3), only th August, and September had proportions of EBLL higher than variation over time.
- Further, the summer months of 2014 were the only data poi April 2015 with EBLL proportions above the average (mean) (Figure 3).

CONCLUSION:

- Based on the results depicted in Figure 3, positive tests for E for children under age 16 living in the City of Flint during the September, 2014.
- However, it's important to note that the purpose of control c the quick detection of abnormal variation—not to construct

Figure 3. Control Chart of Proportion of Childre Poisoning with Elevated Blood Lead Levels, Ma

Figure 1 – Excerpt from a two page memo in July 205 indicating Summer months of 2014 when lead levels in Flint kids spiked

Outside Researchers Asking to Analyze Flint's Blood Lead Data Were Stonewalled: "Yikes!"

On September 2nd 2015, Professor Marc Edwards of Virginia Tech (primary author of this article and source of the Freedom of Information Act documents cited herein) made a simple data request of DHHS. Edwards had previously made an identical request in November 2006 for a blood lead study in Lansing, and that data was provided without any problems. Edwards did not expect problems this time.

His request sat without response until a reminder e-mail was sent, at which point DHHS employee Robert Scott apologized for the delay, and provided the information needed to process the request, acknowledging:

Yes, I think this <study> sounds great. There has been some concern about the water source change in Flint, and in fact we had a call about it today.

The request then sat another 3 days, at which point Edwards inquired again and DHHS said that they were busy and if Edwards wanted the data in ***"a week rather than a month or so-then please send me a paragraph explaining why."*** Edwards wrote:

Yes, I think there is clearly some urgency to the situation. MDEQ has publicly stated that your blood lead records, are showing that there is no public health concern for residents in Flint. The levels of lead in Flint water, that we are finding in our water sampling, are certainly in a range that can cause childhood lead poisoning. Indeed, one child has already, likely been lead poisoned from exposure to high lead in water. I think the fact that you already have other teams working on these records, indicates a high level of interest, and urgency. Congressional interest in the safety of the water is also very high, and this will be an important issue in deciding options for treating the water, in the weeks and months ahead.

If red flags about the data request had not already gone up, the e-mails clearly show alarms were raised immediately throughout all of DHHS after Scott wrote to colleges at 1:09 pm on September 11, 2015 that:

"The attached was submitted to me along with a request for de-identified data, which should be no problem. When you have a few minutes you might want to take a look at it. Sounds like there might be more to this than what we learned previously. Yikes!."

A flurry of e-mails followed, and within the hour, Edwards request that Scott had just said "***should be no problem,***" was in fact encountering all kinds of problems. Specifically, a privacy specialist immediately asked for (amongst other things):

"I want to know more about the study..Saying that the researcher wants to verify the claim of MDEQ is not sufficient.... It does not have to be a great deal longer, but it should explain what the intended use of the blood lead data is. It is also important to know exactly how it will be used for research in order to justify the release...."

The next few weeks were an exercise in frustration, during which it became perfectly apparent to Edwards that DHHS had no interest in fulfilling the routine data request.

In the meantime, emails during the same time period indicate that the state had plenty of time scrutinizing the Virginia Tech data (e.g., "The issue has been ongoing on for awhile now, but picked up steam in July when the Virginia Tech folks got involved."). Moreover, Dr. Mona Hanna-Attisha of Hurley Medical Center had made her own data request in mid-September, and she was having trouble getting it processed as well. Edwards wrote to DHHS on September 24th:

I just spoke to this young researcher at Hurley, and apparently, she has been unable to get access to the state blood lead records. I have to say, it is very disturbing that the state keeps issuing these blood lead reports and statements in their press releases, and refuses to share the data backing them up with outside researchers. Even worse, state reps are running around claiming that these reports are proof that Flint water is safe to drink. Can you tell me why it is so difficult to get this data, and why your

agency is raising so many obstacles to sharing it with everyone who asks? I note that I have been asking to see your data since MDEQ first sent it to reporters back in August, and I count 10 e-mails that I sent responding to all your questions. As of yet, you have given me nothing in response. Yet you have been sending reporters one report after another. It seems your agency is more interested in public relations than sound science.

DHHS Scott immediately wrote to colleagues claiming "***I'm not very happy with him <Edwards> right now,***" and drafted a response that apologized for delays, his vacation, and acknowledging "***my time has been largely taken up with my Department's response to the current situation in Flint***." Hence, the FOIA reveals that DHHS had created their own catch-22: because they had stood and said nothing while MDEQ made false claims about what the blood lead data showed, they had no time to provide data to researchers that wanted to test the truthfulness of the claim.

Scott's DHHS colleague Nancy Peeler asserted that Edwards e-mail had "***intent to escalate and spin things***," and that he (Scott) should not get "caught up in that." After reading the response, Edwards withdrew his request with a plea to let Hanna-Attisha have access to the state's data, and within an hour the two DHHS employees were congratulating one another on their success:

DHHS Peeler to DHHS Robert Scott: ***"Really nice email, thanks."***

DHHS Scott to DHHS Peeler: ***"Thanks-he sent a couple of responses that I'll share on Monday.*** ***"***

An Agency "more interested in public relations than sound science."

Three sets of e-mails involving Peeler and Scott, sent within a day of the above exchange, illustrate the unethical behavior occurring within DHHS at the time—all in the name of public relations and at the expense of sound science.

1) "I'm Sure This One Is Not for the Public." Unbeknownst to Edwards, the day before he asserted in writing that DHHS was behaving unethically by hiding results to help cover up the problem and discredit the findings of Hurley's Mona Hanna-Attisha–they were

doing just that. At 3:45 pm on September 24th, Scott wrote an e-mail entitled "***One more attempt to recreate Hurley.***" The e-mail confirmed that Mona-Hanna Attisha's analysis showing that blood lead had spiked after the switch to Flint River was verified with the DHHS data. But he also noted that ***"I'm sure this one is not for the public."*** When informed that DHHS had knowledge supporting her analysis late last night, Hanna-Attisha confirmed that the state never did share those results with her–rather, the record shows DHHS was working full time to attack the idea there was any problem with childhood lead poisoning in Flint.

2) DHHS Sends Scrubbed Data to Edwards, Hanna-Attisha and Dr. Reynolds (Mott Children's Health Center): But Withholds Damning July Report. In response to Edwards request for the final data that supporting Brad Wurfel's months of assertions that blood lead was not increase, Scott provided both Edwards and Hanna-Attisha with documentation. Unfortunately, it was not the final DHHS memo from late July—that report demonstrated that DHHS knew of a serious lead spike that occurred in summer of 2014. Instead, Scott sent a revised version of the data that had been created just two days before, which had no mention of the statistically significant spike in childhood lead poisoning. Likewise, responding to an earlier request from Dr. Reynolds, DHHS considered sending the July report sent to the Directors Office and Governor, but instead sent a revised version of the data with no hint of problems with blood lead in Flint's children.

3) Peeler's "Secret Hope" is Granted to Handle Free Press Reporter. Reporter Kristi Tanner from the Detroit Free Press was doing her own analysis of the Flint blood lead trends. Repeating the approach of Hanna-Attisha using DHSS data, comparing incidence of lead poisoning before to after the water switch, Tanner demonstrated a statistically significant increase in childhood lead poisoning. A flurry of DHHS e-mails to handle her analysis, went back and forth in DHSS–none of it considered acknowledging that she was correct. After all, Scott's analysis showing the same thing, was surely "***not for the public***." Instead, the following exchange occurred between Peeler, Scott and DHHS public relations.

<u>DHSS Peeler to DHSS Scott (September 25, 2015 1:20 pm):</u>

"I think Bob is the best person to speak to them about the lead data, if you are comfortable with that Bob. My secret hope is that we can work in the fact that this pattern is similar to recent past. ***"***

DHHS Scott promptly delivered a quote (9/25/2015 1:19 pm):

"While the trend for Michigan as a whole has shown a steady decrease in lead poisoning year by year, smaller areas such as the city of Flint have their bumps from year to year while still trending downwards overall. Does that sound reasonable?"

Public Relations to Robert Scott (DHSS) (9/25/2015 1:36 pm):

"I like what you had to say. That's basically what I told her, but she wants to hear it from someone other than a spokesperson. ***Are you available for a call with her."***

The smiley and happy faces inserted in the above e-mails, are indeed part of the original documents. To her credit, Tanner did not buy the states arguments, but did note the DHHS conclusion that the increase was "***seasonal and not related to the water supply***."

Also "Not for the Public:" Data That Caused the State to Admit They Were Wrong.

By October 2nd, the DHHS finally acknowledged that there was a serious problem in Flint. It confirmed that children living in the two zip codes (48503 and 48504) identified by Virginia Tech has having highest lead in water risks , also had increased incidence of childhood lead poisoning after the switch to Flint River. Just as Hurely's Mona—Hanna Attisha had asserted. But they have never, to date, publicly released their in-house data demonstrating the extent of the problem.

Our FOIA reveals a shocking DHHS graph created in October 2015. It shows the statistically significant spike in blood lead that occurred in summer 2014– the scientific result that DHHS has never publicly acknowledged. Even more horrifying, it also shows blood lead skyrocketing in summer of 2015, to the point where 9.5-12.5 percent of children in Flint's two high risk zip codes were lead poisoned. This is in the range of Hurley's more recent estimate that incidence of

childhood lead poisoning in some neighborhoods was as high as 15%.
It goes without saying, surely, that this data was also "not for the public."

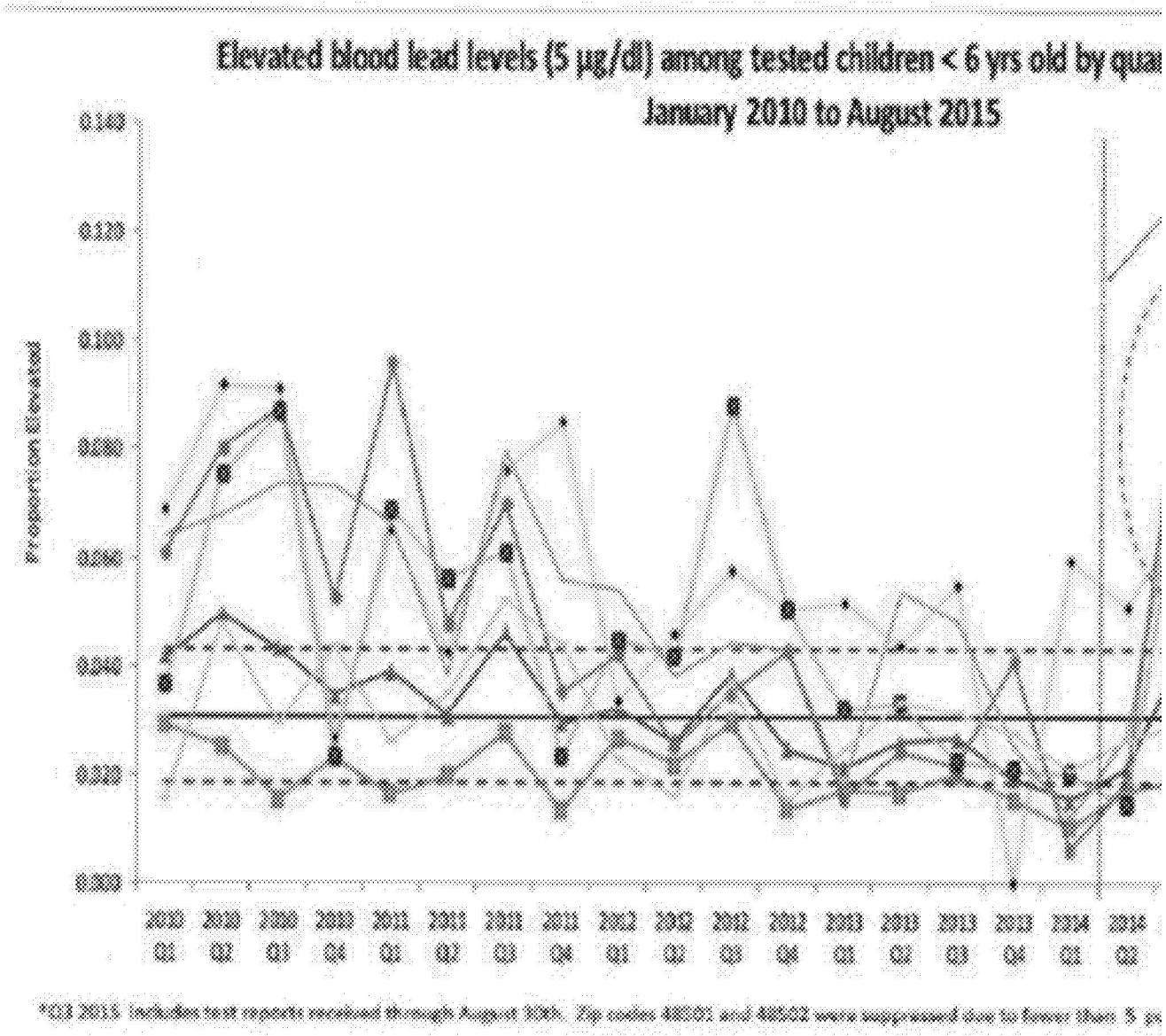


Figure 2: DHHS graph showing skyrocketing blood lead in 2nd and 3rd quarter of 2015, in two Flint zip codes identified by Virginia Tech as having highest water lead risk

FOIA Response Delayed by False Claims of "Litigation Hold" and "Attorney Client Privilege."

DHHS fought hard to delay release of these documents. After the legal time allowed for FOIA elapsed, and Edwards had paid for the request, DHSS fabricated claims of a "Litigation Hold" and "Attorney Client

Privilege" as cause for further delays. We want to publicly thank Nancy Kaffer for pointing out the absurdity of these claims. We are also deeply indebted to Senator Ananich and his staff, who fought for release of these documents to us late Friday night.

MDHHS emails obtained via FOIA requests regarding blood lead levels of kids in Michigan, specifically in Flint

Download (PDF, 8.94MB)

These are the first batch of emails. We will possibly be releasing a second set sometime in January.

Primary Author: Dr. Marc Edwards

Acknowledgements: Siddhartha Roy

Nancy

Nancy Grijalva
Assistant to Nick Lyon, Director
Michigan Department of Health and Human Services

MDHHS
Michigan Department of Health & Human Services

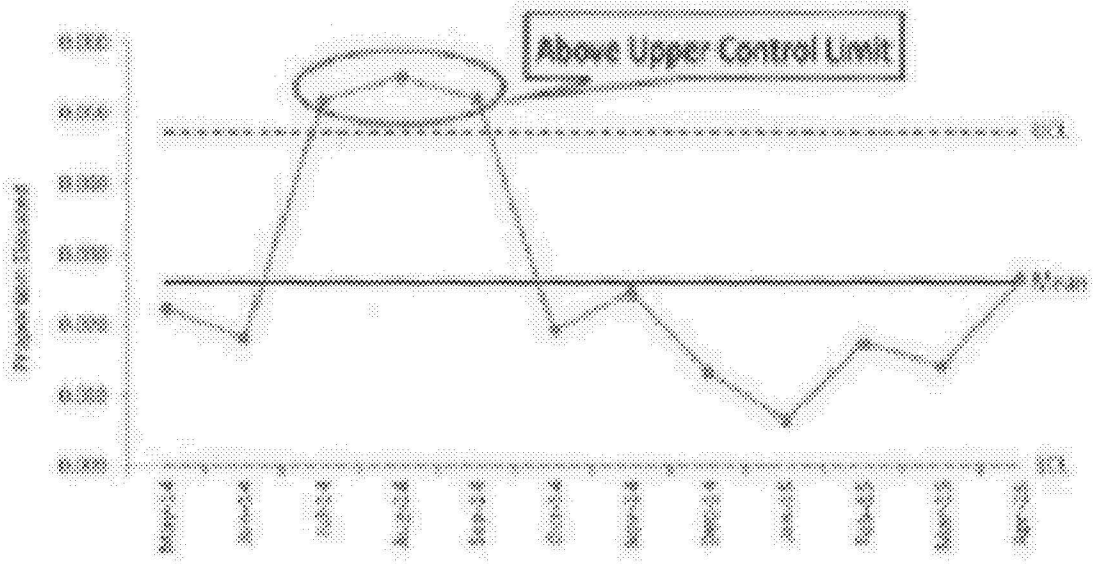
RESULTS:

- Figure 2 shows that—on average—there appears to be a higher proportion of first-time EBLL during the summer months of July, August, and September.
- However, even compared to the previous three years, the proportion of first-time EBLL is highest during summer 2014 (Figure 2).
- Based on the control chart for proportions (Figure 3), only the summer months of July, August, and September had proportions of EBLL higher than that expected from random variation over time.
- Further, the summer months of 2014 were the only data points between May 2014 and April 2015 with EBLL proportions above the average (mean) of the previous three years (Figure 3).

CONCLUSION:

- Based on the results depicted in Figure 3, positive tests for EBLL were higher than usual for children under age 16 living in the City of Flint during the months of July, August, and September, 2014.
- However, it's important to note that the purpose of control charts is to monitor data for the quick detection of abnormal variation—not to construct a case for causality.

Figure 3. Control Chart of Proportion of Children Tested for Lead Poisoning with Elevated Blood Lead Levels, May 2014—April 2015



Note: Data are reported by quarter of test. The water source was changed from Detroit to Flint River in April 2014.

From: Clement, Elizabeth (GOV)
Sent: Thursday, December 03, 2015 2:39 PM
To: Baird, Richard (GOV)
Subject: Fwd: ACTION NEEDED on Flint water documents
Attachments: Flint EBL Data Press Release V9.docx; ATT00001.htm; Comms Plan - Flint EBL Data Summary 12315.docx; ATT00002.htm; Flint Blood Lead Level Summary Report Dec.pdf; ATT00003.htm

Do you want to be on these emails or do you prefer I forward them separately to you? Trying to be respectful of your role with the after action team.

Sent from my iPhone

Begin forwarded message:

From: "Murray, David (GOV)" <MurrayD1@michigan.gov>
Date: December 3, 2015 at 12:43:51 PM EST
To: "Snyder, Rick (GOV)" <[redacted]>
Cc: "Scott, Allison (GOV)" <scotta12@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>, "Clement, Elizabeth (GOV)" <clemente@michigan.gov>
Subject: ACTION NEEDED on Flint water documents

Good afternoon Governor,

Sorry for the quick turnaround time on this, but DHHS is hoping to issue the release this afternoon to avoid issuing news on Friday. The DHHS team has answered the questions and made significant revisions to the press release at my request. I think this is far more reader friendly and people focused.

Here are the specific answers to the questions:

Do the elevated lead levels stick with a person for life?
We do see blood lead levels decrease after education takes place and exposure to lead sources is reduced. The purpose of screening children for lead is to identify those with elevated levels. Removing potential sources of lead exposure and ensuring proper nutrition and healthcare leads to decreases in blood lead levels in follow-up testing, which is an important part of case management. Lead has a half-life in blood of approximately 25 days; in soft tissue, about 40 days; and in the non-labile portion of bone, more than 25 years.

Why do the lead levels spike on a seasonal basis?
When reviewing historical trend data, the risk of lead exposure is highest during the third quarter of each year – July through September. Seasonal variation is the result of a number of factors including increased exposure to lead in dust and soil in the summer months.

DHHS is requesting to issue this at 2 p.m. with Dr. Wells available to answer questions.

Thank you for your consideration.

Dave

The notifications will be timed as follows:

1:30 p.m.

- Send final embargoed release and summary report to:
  - Genesee County Health Department – Geralyn Lasher
  - Dr. Mona Hannah-Attisha – Geralyn Lasher
  - Task Force Members – Geralyn Lasher
  - City of Flint Mayor's Office – Geralyn Lasher
  - Congress and legislature – Elizabeth Hertel

2 p.m.

- Issue press release and summary report
- Post press release and summary report to MDHHS website newsroom and Flint Water website, www.michigan.gov/flintwater

Please let me know if you have any additional questions, edits or concerns.

Thank you,

Jennifer Eisner
Public Information Officer
Michigan Department of Health and Human Services
Office: 517-241-2112 or EisnerJ@michigan.gov
[redacted]

STATE OF MICHIGAN

RICK SNYDER
GOVERNOR

DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

NICK LYON
DIRECTOR

FOR IMMEDIATE RELEASE
December 3, 2015

CONTACT: Jennifer Eisner
(517) 241-2112

MDHHS releases latest data outlining blood lead levels in Flint

Follow-up care, case management resources continue for families

LANSING, Mich. – Preliminary data indicates that 30 of 1,361 adults and children tested in Flint since October 1 had elevated blood lead levels, according to a report issued today by the Michigan Department of Health and Human Services.

This marks the first summary report on lead testing called for in the state's action plan related to health concerns about Flint's water infrastructure.

"Our goal is to help families reduce their exposure to lead sources," said Dr. Eden Wells, MDHHS chief medical executive. "We have made progress in testing and identifying those with elevated blood lead levels, and the department will continue to work closely with the Genesee County Health Department to reach these families. We will remain diligent in our ongoing outreach and education efforts."

Information comes from tests administered citywide to 1,361 children and adults since October 1. Tests showed that 21 of 969 children age 17 or younger and 9 of 392 adults over the age 18 were identified with elevated blood lead levels.

The report covers test results reported to MDHHS since the state action plan was put in place Oct. 2. It includes the number of tests and number of elevated blood lead levels greater than 5 micrograms per deciliter, and captures both capillary and venous blood tests that have been reported to MDHHS since the beginning of October. People who have had multiple tests are counted only once. Five micrograms per deciliter is the level that the Centers for Disease Control and Prevention considers elevated and triggers health care professional follow up with families.

The full report is posted online at www.michigan.gov/flintwater and will be updated as more data becomes available.

When reviewing historical trend data, the risk of lead exposure is highest during the third quarter of each year – July through September. Seasonal variation is the result of a number of factors including increased exposure to lead in dust and soil in the summer months.

In the third quarter of 2010, 8.3 percent of Flint children 6 and under showed elevated blood lead levels. The figure gradually decreased to 4.1 percent in the third quarter of 2013. During the same months in 2014, the figure increased to 7.5 percent and decreased to 6.4 percent in the third quarter of 2015.

– MORE –

Last month, MDHHS collaborated with the county health department and local partners to distribute educational resources and informational letters to Flint parents regarding lead testing. The state is providing funding for GCHD nurses to work with families when an elevated blood lead level has been detected. During these follow-up visits, nurses coordinate with environmental health investigators to meet with families in their homes to identify lead exposures, address questions and provide water filters. People can be exposed to lead from paint, soil, plumbing and other sources.

MDHHS continues to provide free water filters and replacement cartridges to Flint residents at four locations, including the MDHHS Flint offices and the Genesee County Community Action Resource Department. For a full list of locations and hours of distribution, visit www.michigan.gov/flintwater.

To help residents properly install water filters, and to demonstrate how to replace the original when it expires, MDHHS has created an instructional video on its YouTube channel. For updates, visit www.michigan.gov/flintwater.

# # #

Flint EBL Data Summary

Communications Plan

Purpose

To release elevated blood lead level data for the city of Flint and communicate the summary to our partners in the community as well as local and state media. The report is intended to inform residents about blood lead level testing efforts in Flint and provide preliminary cumulative numbers on an ongoing basis.

Communications Timeline – December 3, 2015

11 a.m.

- Send final release and summary report to Governor's office, Michigan Department of Environmental Quality

1:30 p.m.

- Send final embargoed release and summary report to:
  - Genesee County Health Department – Geralyn Lasher
  - Dr. Mona Hannah-Attisha – Geralyn Lasher
  - Task Force Members – Geralyn Lasher
  - City of Flint Mayor's Office – Geralyn Lasher
  - Congress and legislature – Elizabeth Hertel

2 p.m.

- Issue press release and summary report
- Post press release and summary report to MDHHS website newsroom and Flint Water website, www.michigan.gov/flintwater

3 p.m.

- Pitched media interviews with Dr. Eden Wells:
  - Ron Fonger, MLive
  - Kristi Tanner, Detroit Free Press
  - Robin Erb, Detroit Free Press
  - Steve Carmody, Michigan Radio

MDHHS Contacts – Office Number 517-241-2112

- Geralyn Lasher, cell – [redacted]
- Angela Minicuci, cell – [redacted]
- Jennifer Eisner, cell – [redacted]

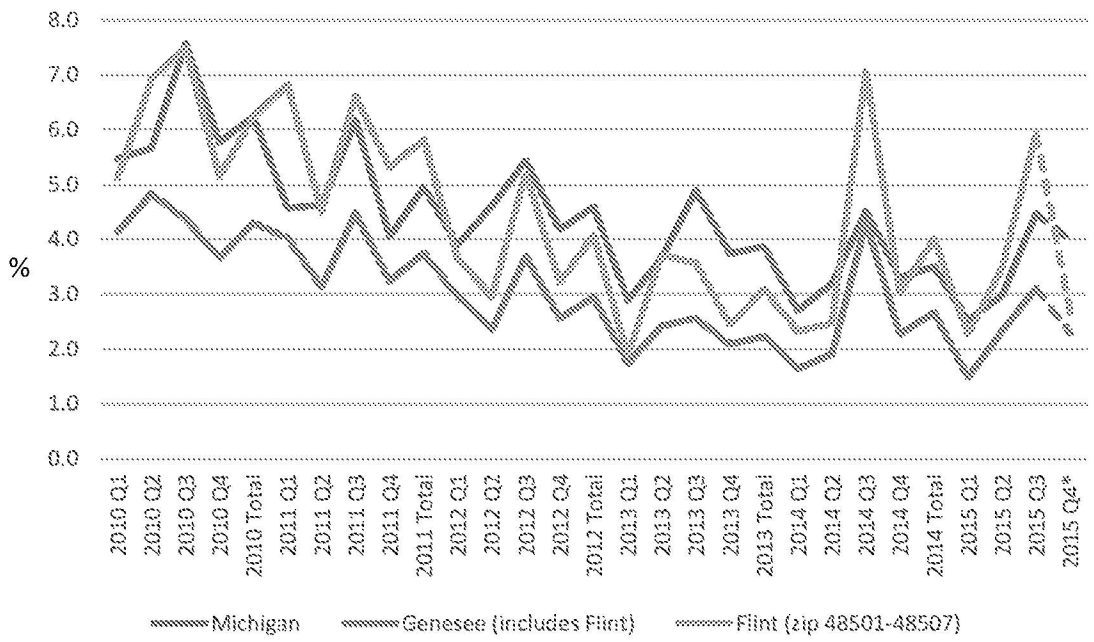
Michigan Department of Health and Human Services (MDHHS)
Blood Lead Level Test Results for Flint Zip Codes 48501-48507
Genesee County, and the State of Michigan
Summary as of November 13, 2015

Executive Summary

This report is generated by MDHHS to track Blood Lead Level test results in Flint, Michigan.

- Counts on this report include both capillary and venous blood tests. People who have had multiple tests are counted only once per year.
- Since 10/1/2015, an additional 1,361 people have been tested in Flint.
- Continued testing efforts by Genesee County Health Department, MDHHS and local medical personnel have identified 21 children with blood lead levels greater than or equal to 5µg/dL (micrograms per deciliter) since 10/1/2015.
- Three percent of the children younger than 6 years old tested since 10/1/2015 have had blood lead levels greater than or equal to 5µg/dL.
- Additional testing is ongoing. Counts will vary as new results are added.

Incidence of elevated blood lead > = 5 mcg/dl among children < 6 years of age by quarter, 2010- 2015



Deduplicated by year, retains test during the time period.
*Data for Q4 2015 are incomplete

** Data for Quarter 4 of 2015 are incomplete and subject to change*

	Children younger than 6 Years Old			Children 6 to 17 Years Old		
	Michigan	Genesee County	Flint 48501-48507	Michigan	Genesee County	Flint 48501-48507
Total tested for lead 1/1/2010 to 12/31/2010:	152,608	6,932	3,560	17,963	867	463
Number of test results ≥5µg/dL 1/1/2010 to 12/31/10:	9,509	298	222	907	25	20
Total tested for lead from 1/1/2011 to 12/31/2011:	149,420	6,667	3,093	15,725	1,038	544
Number of test results ≥5µg/dL 1/1/2011 to 12/31/11:	7,392	250	180	651	20	15
Total tested for lead 1/1/2012 to 12/31/2012:	146,142	7,008	3,112	15,460	1,386	630
Number of test results ≥5µg/dL 1/1/2012 to 12/31/12:	6,704	206	127	478	17	12
Total tested for lead 1/1/2013 to 12/31/2013:	145,813	6,986	3,077	13,897	1,241	566
Number of test results ≥5µg/dL 1/1/2013 to 12/31/13:	5,647	156	95	342	9	4
Total tested for lead 1/1/2014 to 12/31/2014:	141,355	6,690	3,045	12,936	913	428
Number of test results ≥5µg/dL 1/1/2014 to 12/31/14:	4,948	178	122	386	6	5
Total tested for lead 1/1/2015 to 11/13/2015:	120,699	5,778	2,704	10,841	1,197	765
Number of test results ≥5µg/dL 1/1/2015 to 11/13/2015:	4,200	149	101	309	10	8
Total tested for lead 10/1/2015 to 11/13/2015:	14,593	957	560	1,412	502	409
Number of test results ≥5µg/dL 10/1/2015 to 11/13/2015:	583	22	15	38	6	6

** Data for Quarter 4 of 2015 are incomplete and subject to change*

	Adults 18 Years and Older			Total Number of People of All Ages Tested		
	Michigan	Genesee County	Flint 48501-48507	Michigan	Genesee County	Flint 48501-48507
Total tested for lead 1/1/2010 to 12/31/2010:	13,853	602	195	184,424	8,401	4,218
Number of test results ≥5µg/dL 1/1/2010 to 12/31/10:	1,462	42	18	11,878	365	260
Total tested for lead 1/1/2011 to 12/31/2011:	13,259	542	139	178,404	8,247	2,726
Number of test results ≥5µg/dL 1/1/2011 to 12/31/11:	1,369	44	16	9,412	314	211
Total tested for lead 1/1/2012 to 12/31/2012:	13,059	556	155	174,661	8,950	3,907
Number of test results ≥5µg/dL 1/1/2012 to 12/31/12:	1,415	33	11	8,597	256	150
Total tested for lead 1/1/2013 to 12/31/2013:	12,199	498	136	171,909	8,725	3,779
Number of test results ≥5µg/dL 1/1/2013 to 12/31/13:	1,499	54	16	7,488	219	115
Total tested for lead 1/1/2014 to 12/31/2014:	12,684	441	112	166,975	8,044	3,585
Number of test results ≥5µg/dL 1/1/2014 to 12/31/14:	1,422	44	12	6,756	228	139
Total tested for lead 1/1/2015 to 11/13/2015:	11,685	860	526	143,225	7,835	3,995
Number of test results ≥5µg/dL 1/1/2015 to 11/13/2015:	1,195	30	15	5,704	204	124
Total tested for lead 10/1/2015 to 11/13/2015:	1,615	483	392	17,620	1,942	1,361
Number of test results ≥5µg/dL 10/1/2015 to 11/13/2015:	160	11	9	781	44	30

** Data for Quarter 4 of 2015 are incomplete and subject to change*

From: Brader, Valerie (GOV)
Sent: Tuesday, October 14, 2014 3:19 PM
To: Wyant, Dan (DEQ); Anderson, Madhu (DEQ); Datema, Maggie (DEQ)
Cc: Ackerman, Darin (GOV)
Subject: FW: GM's decision to stop using Flint River water will cost Flint $400,000 per year

FYI. This underscores the need for the folks from DEQ to talk to the EM in Flint, and to make sure a blended water solution is being explored. I know Dan's team was working on getting that set up.

From: Bryanna McGarry [BMcGarry@senate.michigan.gov]
Sent: Tuesday, October 14, 2014 12:45 PM
To: Brader, Valerie (GOV)
Cc: T[redacted] S[redacted]
Subject: GM's decision to stop using Flint River water will cost Flint $400,000 per year

Hi Valerie,

Hope you're doing well. Senator Ananich asked me to forward you this article about GM's decision to stop using Flint River water: http://www.mlive.com/news/flint/index.ssf/2014/10/gms_decision_to_stop_using_fli.html. He mentioned he'd had a conversation with you about Flint's water issues and just wanted to ensure you saw the latest.

Thanks! Have a wonderful afternoon. :)

Best,

Bryanna

--
Bryanna McGarry, MSW
Legislative Director
State Senator Jim Ananich
District 27
517-373-5133

From: Roberts, John (DTMB)
Sent: Tuesday, July 21, 2015 4:53 PM
To: Ackerman, Darin (GOV)
Cc: Starr, Scott (DTMB)
Subject: FW: Hamilton Dam

Importance: High

FYI

From: McNeely, Jacques (DTMB)
Sent: Tuesday, July 21, 2015 4:25 PM
To: Roberts, John (DTMB)
Cc: Duncan, Nancy (DTMB)
Subject: FW: Hamilton Dam
Importance: High

Just spoke with the agency again, this is more of the Flint water system issue. Specifically, the Hamilton Dam has historically, been the secondary water source for the City, however, with the cancellation of the Detroit Water contract, this is now the primary water source, along with the Flint River. Hence the urgency . . .

Unfortunately, no state DEQ/DNR restricted or federal programs are available for dam repair/removal. Therefore, general fund support has been the default for years. According to a CRC report from 2007, (see page 56 here) the City sought to utilize its sewer and water fund, however, learned it could not borrow from the State Revolving Fund to accommodate the $7.5 million price tag. Given Flint's overall budget situation, and it's water challenges, this is just more of the same . . .

From: McNeely, Jacques (DTMB)
Sent: Tuesday, July 21, 2015 4:13 PM
To: Roberts, John (DTMB)
Cc: Duncan, Nancy (DTMB)
Subject: Hamilton Dam

John,

DNR indicates this 100 year old structure, located outside of the U of M Flint campus, is rated as "unsatisfactory" by DEQ/DNR technical staff, with an estimated price tag to repair in the $7.5 million range (2007 report). The City of Flint owns the structure, and State resources to address are simply non-existent.

Specifically, DNR has some $350,000 GF/GP appropriated for dam management assistance statewide. One-time GF/GP support of $2 million was provided in Fy13 for statewide efforts, however, we have been unable to add more monies to date.

[Note: DNR got off of my call to field an heavily anticipated incoming from a scientist knowledgeable about this project. I will provide further update once the agency calls back.]

Jacques

From: Agen, Jarrod (GOV)
Sent: Tuesday, December 29, 2015 5:23 PM
To: Posthumus, Dick (GOV); Ackerman, Darin (GOV)
Cc: Baird, Richard (GOV); Clement, Elizabeth (GOV)
Subject: FW: Attached Letter from Flint Water Advisory Task Force
Attachments: FWATF-Snyder Letter %28122915%29.pdf

Dick & Darin,

Here's the letter from our Flint Water Task Force.

It was received today and they plan to make it public tomorrow.

If you feel it will help to share with SML, feel free to do so.

Adding Rich & Beth in case they feel otherwise.

Thanks

December 29, 2015

Dear Governor Snyder:

The Flint Water Advisory Task Force, which you appointed on October 21, 2015, has devoted considerable effort and countless hours to our review of the contamination of the Flint water supply: what happened, why it occurred, and what is needed to prevent a recurrence in Flint or elsewhere in the state. We have also been assessing ongoing mitigation efforts to help assure that short- and long-term public health issues and water management concerns will be properly addressed to safeguard the health and well being of the Flint community.

Shortly after we began our work, we recognized the immediate need for better coordination of the state's response to the ongoing public health issues in Flint, and for assignment of a single person to provide this coordination. We addressed these concerns in a letter to you on December 7, 2015, and you responded with immediate adoption of these recommendations. We thank you for the commitment your response demonstrates.

In our continuing efforts, we have now interviewed numerous individuals at state and local levels; reviewed many documents, articles, and emails; and deliberated repeatedly as a group. Both individually and as a group, we have visited Flint several times during the past several weeks to meet with citizens, public health officials and healthcare providers, individuals who have water management responsibilities at the city and county levels, and other public officials.

It is clear to us, particularly as we listen to the people of Flint, that it is both critical and urgent to establish responsibility for what happened in their community and to ensure accountability. This is a first step in a long process to re-establish the trust they no longer have in their government and the agencies whose responsibility it is to protect their health. It is urgent because this deep distrust of government continues to compromise the effective delivery of protective services designed to address ongoing public health issues. It is for these reasons that we are sending this letter at this time.

We believe the primary responsibility for what happened in Flint rests with the Michigan Department of Environmental Quality (MDEQ). Although many individuals and entities at state and local levels contributed to creating and prolonging the problem, MDEQ is the government agency that has responsibility to ensure safe drinking water in Michigan. It failed in that responsibility and must be held accountable for that failure.

The Safe Drinking Water Act (SDWA) places responsibility for compliance with its requirements on the public water system. In this instance, the City of Flint had the responsibility to operate its water system within SDWA requirements, under the jurisdiction of the MDEQ. The role of the MDEQ is to **ensure** compliance with the SDWA through its regulatory oversight as the primary agency having enforcement responsibility for the Flint water system.

The MDEQ failed in three fundamental ways.

Regulatory Failure

We believe that in the Office of Drinking Water and Municipal Assistance (ODWMA) at MDEQ, a culture exists in which "technical compliance" is considered sufficient to ensure safe drinking water in Michigan.

This minimalist approach to regulatory and oversight responsibility is unacceptable and simply insufficient to the task of public protection. It led to MDEQ's failure to recognize a number of indications that switching the water source in Flint would—and did—compromise both water safety and water quality. The MDEQ made a number of decisions that were, and continue to be, justified on the basis that federal rules "allowed" those decisions to be made. ODWMA must adopt a posture that is driven not by this minimalist technical compliance approach, but rather by one that is founded on *what needs to be done to assure drinking water safety.*

A culture change must occur within ODWMA. It must be driven by a mission that is aspirational regarding the role of the MDEQ in ensuring the safety and the quality of Michigan's drinking water. We believe, and have expressed to MDEQ Director Dan Wyant, that as a Great Lakes State, Michigan should aspire to have the safest drinking water in the nation, rather than merely aiming for technical compliance with regulatory requirements.

Failure in Substance and Tone of MDEQ Response to the Public

Throughout 2015, as the public raised concerns and as independent studies and testing were conducted and brought to the attention of MDEQ, the agency's response was often one of aggressive dismissal, belittlement, and attempts to discredit these efforts and the individuals involved. We find both the tone and substance of many MDEQ public statements to be completely unacceptable. In a real way, the MDEQ represents the public, including the very individuals it treated dismissively and disrespectfully in public statements. We recognize that the agency might disagree with the opinions of others on a variety of issues, including testing protocol, interpretation of testing results, the requirements of federal law and rules, and other matters. What is disturbing about MDEQ's responses, however, is their persistent tone of scorn and derision. In fact, the MDEQ seems to have been more determined to discredit the work of others—who ultimately proved to be right—than to pursue its own oversight responsibility.

Failure in MDEQ Interpretation of the Lead and Copper Rule

The federal Lead and Copper Rule (LCR) is central to what happened in Flint, because that rule, at least theoretically, is designed to prevent lead and copper contamination of drinking water. The federal LCR calls for "optimized corrosion control treatment," which the MDEQ did not require in the switch to the Flint River. Prior to the switch, MDEQ staff instructed City of Flint water treatment staff that corrosion control treatment (CCT) was not necessary until two six-month monitoring periods had been conducted. The need for CCT would be evaluated after the results from those two monitoring periods were reviewed. The decision not to require CCT, made at the direction of the MDEQ, led directly to the contamination of the Flint water system.

The MDEQ seems to have taken different positions on whether it faithfully followed the LCR in the Flint situation. It first maintained that it followed the LCR, then stated that it did not follow the rule properly, and most recently claimed that a federal memorandum issued by the US EPA in early November 2015 suggests that the original MDEQ interpretation was possibly correct.

We are not convinced. Even the MDEQ's latest interpretation of the US EPA's November memorandum is overly legalistic and misunderstands the intent of the LCR, which is to minimize risks of lead and copper exposure for human health.

We believe ODWMA's single-minded legalistic focus is the heart of the problem, and it is part of the "technical compliance" culture described above. ODWMA should not be basing its actions solely on a

legally possible interpretation of the LCR. It should be focusing on how to protect Michigan's citizens from lead in drinking water.

We met with MDEQ Director Wyant on December 16, 2015, to discuss these issues, as well as many others. We note his substantial agreement with many of our conclusions, particularly as it relates to the regulatory failure and the abysmal public response of his agency. It is our understanding that he has drawn similar conclusions in his own evaluation of the MDEQ's role in the Flint water crisis. At the same time, it was disappointing to hear his weak defense of the CCT decision based on the EPA's November 2015 memorandum.

We are not finished with our work. Other individuals and entities made poor decisions, contributing to and prolonging the contamination of the drinking water supply in Flint. As an example, we are particularly concerned by recent revelations of MDHHS's apparent early knowledge of, yet silence about, elevated blood lead levels detected among Flint's children. We also feel it important to further review local government decision processes under emergency management. Our final report will highlight and discuss those concerns, among many others, to provide some context to a comprehensive series of recommendations. **As stated earlier in this letter, however, we believe that establishing responsibility is a critical and urgent need, and one that should not wait for our final report in 2016. Individuals and agencies responsible must be held accountable in a timely fashion.**

It is our hope that the heightened awareness of the dangers of lead poisoning can be an opportunity to make Michigan safer, particularly for its children. Drinking water must be recognized as a potential source of health risk exposure when water lines and fixtures containing lead are disturbed or compromised. Proper testing, not only in high-risk areas but also in facilities serving children (e.g., schools), must be considered. Facilitating long-term financing of a model public health program, and also replacement of lead-containing water service lines and fixtures, would enable Michigan to realize a positive lasting legacy from the tragedy of the Flint water crisis. Our final report will address some of these issues.

The City of Flint's water customers—fellow Michigan citizens—were needlessly and tragically exposed to toxic levels of lead through their drinking water supply. They deserve a commitment to properly assess responsibility and ensure accountability. They also deserve a commitment to needed mitigation in both the short and long term. The Flint water crisis never should have happened. Having failed to prevent it, state government should coordinate a sustained, public-health-focused response to remedy, to the fullest extent possible, the impacts on the Flint community.

Respectfully yours,

Flint Water Advisory Task Force:

Matt Davis
Chris Kolb
Larry Reynolds
Eric Rothstein
Ken Sikkema

Subject:	Muchmore/Baird re DWSD & Flint
Location:	DM
Start:	Wed 2/4/2015 4:30 PM
End:	Wed 2/4/2015 5:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Muchmore, Dennis (GOV)
Required Attendees:	VanSickle, Michele (GOV); Baird, Richard (GOV)

From: Darnell Earley <dearley@cityofflint.com>
Sent: Friday, October 31, 2014 11:58 AM
To: Baird, Richard (GOV)
Subject: Re: Thank You!

Thanks...I'll look forward to it!

Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

On Fri, Oct 31, 2014 at 11:51 AM, Baird, Richard (GOV) <bairdr@michigan.gov> wrote:
Very good! Lets get together after the election. Great work!

Sent from my Verizon Wireless 4G LTE DROID

Darnell Earley <dearley@cityofflint.com> wrote:

Good Morning Rich:

Just as an FYI, we had a very productive meeting. If you would like a briefing, please give me call.

Have a good weekend!
[http://cityofflint.com/images/Signature.jpg][X]
Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

---------- Forwarded message ----------
From: Darnell Earley <dearley@cityofflint.com<mailto:dearley@cityofflint.com>>
Date: Fri, Oct 31, 2014 at 11:43 AM
Subject: Thank You!
To: wyantd@michigan.gov<mailto:wyantd@michigan.gov>
Cc: Dayne Walling <dwalling@cityofflint.com<mailto:dwalling@cityofflint.com>>, "Workman, Wayne (TREASURY)" <workmanw@michigan.gov<mailto:workmanw@michigan.gov>>, "Byrne, Randall (Treasury)" <ByrneR1@michigan.gov<mailto:ByrneR1@michigan.gov>>, "Koryzno, Edward (Treasury)" <koryznoe@michigan.gov<mailto:koryznoe@michigan.gov>>, Kelly Rossman-McKinney <[redacted]>, Elizabeth Murphy <emurphy@cityofflint.com<mailto:emurphy@cityofflint.com>>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov<mailto:hollinsh@michigan.gov>>

Good Morning Director Wyant:

I wanted to take just a moment to thank you and your team for travelling to Flint Wednesday to meet with me, the Mayor, and the Utilities Department staff.

Everyone on our end appreciated the opportunity to meet directly with you and your key staff at the DEQ. We all felt it was a very productive discussion of the many difficult issues facing the City of Flint not only during this transition, but as its own long-term, sustainable water supply and distribution system, leading towards full implementation of the KWA project. As you know Flint is slated to convert to the KWA water source well within the next 18 month timeline. Until that happens however, I think you would agree that we have an excellent opportunity here to send a good, positive message about how the City is managing its water services, and working very closely with your office in the process.

As we discussed, an initial media hit from your office fairly soon would also help us build public confidence through stronger communication on how we are responding to the challenges we encounter, your department's support of our efforts to resolve them, and the resultant potability of the current water source. If there are other next steps you need from us regarding such a media release, please don't hesitate to contact me.

We look forward to our continued partnership in addressing these and other matters critical to environmental quality in the City of Flint and the State of Michigan!

Sincerely,
[http://cityofflint.com/images/Signature.jpg][X]
Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

From: Murray, David (GOV)
Sent: Wednesday, September 30, 2015 9:35 AM
To: Baird, Richard (GOV)
Subject: Flint water background information
Attachments: Flint water FAQs (00000004).pdf; Sharable Flint Lead TP 092415 (00000002).docx

Hi Rich,

These are two documents that I think are helpful addressing the questions about lead and Flint water overall, prepared by DEQ and DHHS. These were intended for internal use, so please ask our partners to not share them beyond the people on their teams making the decisions.

Please let me know if you need anything else.

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

Frequently Asked Questions:
Water Lead Levels in the City of Flint
September 2015

How can lead get into drinking water?
Lead detections in Flint drinking water exist at the home level. Sampling at the Flint Water Treatment Plant has shown no lead in its treated water. However, this contaminant leaches into water from a home's lead service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings.

Does the city meet federal drinking water standards for lead and copper?
Yes, the city is meeting state and federal guidelines for lead and copper.

The City of Flint has regularly monitored for lead and copper since federal law began requiring it in 1991.

When the City changed water sources in May 2014, state and federal law required the city to sample for lead and copper for a full year to determine how the water may be interacting with residential lead plumbing to increase lead levels. While the city's results show residential lead levels below the federal threshold for immediate response activities, Flint is moving quickly to optimize corrosion control measures in its water system.

Some individual homes showed high numbers for lead. Isn't that a concern?
For the homeowner, yes it is. There is no "safe" level for lead, and while the leading cause of lead poisoning around the country is lead paint, any source of lead ingestion is worthy of concern.

But the State and federal guidelines for lead and copper acknowledge an important reality: Any home that has a lead service connection or lead plumbing will impart some varying amount of lead into the home's water. The only way to eliminate lead in a home water system is to remove lead plumbing or replace lead service connections to the city system.

The lead and copper rule requires the local operator to sample dozens, sometimes hundreds of homes in the service area to get a general sense of how the water supply is interacting with lead plumbing and service connections. The tests are done specifically at homes with lead service connections. Individual results vary and all participants are

Are there other ways the city monitors for lead exposure?
The County Health Department, overseen statewide by the Michigan Department of Health and Human Services, regularly monitors blood levels in children throughout Michigan communities. The leading cause of lead poisoning is exposure to lead paint.

Blood lead level testing results for the 12-month period just after the City of Flint changed its water source (May 2014 – April 2015) showed no significant change in the pattern of blood lead levels in Flint, compared to the previous three years. This data suggests the recent change in water source by the City of Flint has not contributed to an increase in lead exposure throughout the community.

How does the state decide if the water is creating a lead problem?
Compliance with the federal lead rule is based on a 90th percentile calculation. If more than 10 percent of samples report lead above the federal action level of **15 parts per billion**, a water supply has an "action level exceedance." An exceedance is not a violation. It triggers other requirements which could include public notification, additional water quality sampling, and possibly further treatment.

While some of Flint's individual samples exceeded the 15 parts-per-billion lead action level, compliance is based on **the 90th percentile of samples**. The City of Flint's 90th percentile level has ranged between 0 parts per billion in 2008 and 2011, and 15 parts per billion in 1992, but never exceeded the action level.

The two most recent sampling periods, in 2014 and 2015, were 6 parts per billion and 11 parts per billion, respectively.

Did the city use <u>every</u> sample they got back?
Sampling requirements for lead and copper are designed to target the most common pathways to lead ingestion in homes with the least protection. The sample must be collected from a commonly used kitchen or bathroom tap, and in accordance with the provided sampling instructions. Homes that employ filtration or additional treatment cannot be included. Samples must also be collected within the established monitoring period.

I have a lead service connection or lead plumbing. What should I do?
Replacement is the only way to eliminate lead exposure. However, here are some interim steps homeowners can take to reduce it:

Flush pipes before drinking, and only use cold water for consumption.

The more time water has been sitting in your home's pipes, the more lead it may contain. When water in a particular faucet has not been used for six hours or longer, "flush" cold-water pipes by running the water until it becomes as cold as it will get. This could take five to 30 seconds if there has been recent water use elsewhere in the home, such as showering or flushing toilets. Otherwise, it could take two minutes or longer.

Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead.

Who is responsible for replacement of leaded materials?

Replacement of service pipes on private property and any leaded plumbing materials within the home is a **homeowner's responsibility**. The City of Flint owns the service pipe from the water main to the curb stop valve, and that is **the City's responsibility**. This valve is normally located two feet in from the street curb. From there to the house is private property and the responsibility of the homeowner.

Why doesn't the city at least replace its portion of lead service lines?

Partial lead service line replacement has been shown to mobilize more lead and make the situation worse. Only full lead service line replacement has been demonstrated effective in achieving long-term reductions in drinking water lead levels.

What is the City's timeline for installation of corrosion control treatment?

The federal government allows the steps to complete the installation of optimal corrosion control treatment and follow-up monitoring to take up to five years.

However, the City of Flint has committed to completing installation of Optimized Corrosion Control Treatment in **less than six months**.

What will happen when Flint joins the Karegnondi Water Authority next year?

The City has committed to having Optimized Corrosion Control Treatment in place prior to its connection with the Karegnondi Water Authority (KWA). The water provided by KWA will come from a new source, Lake Huron. The city will continue its lead and copper sampling every six months. Additionally, the city's water treatment plant will continue to operate with uninterrupted Optimized Corrosion Control Treatment.

How long would it take to replace lead service lines throughout Flint?

The city has about 32,900 service connections in total. **More than 15,000** of these connections are considered lead service lines. Even if many crews were contracted, it would likely take up to 15 years to complete this work.

What would it cost to replace the lead service line at my house?

Average costs to replace a lead service line at an individual home range from $2,000 to $8,000. Costs vary depending on the length and size of service line that is needed, as well as the ground cover and soil conditions encountered.

With more than 15,000 lead service lines at an estimated average cost of $4,000 for each replacement, total cost could **be $60 million or more**.

Blood Lead Levels in Flint background information
September 24, 2015

- Promoting the health of our residents is a statewide priority – a priority that includes ensuring clean, safe drinking water for all residents and especially children.
- The results of the Hurley Children's Hospital are under review by the Michigan Department of Health and Human Services.
- The analysis that Hurley conducted is different from the way MDHHS has analyzed data regarding blood lead levels in Flint.
- MDHHS is looking to see if we can replicate the results of the Hurley study to see how they achieved their results.

MDHHS Blood Lead Testing Results in Flint

- MDDHS data shows a comprehensive look at the data since 2010, years before the change in Flint's water source occurred in April 2014.
- Each year shows a seasonal increase in childhood lead poisoning in the summer months, the highest seasonal increase of which occurred in 2010.
- If elevated blood lead levels were being driven by the change in water, we would expect to see the elevated levels remain high after the change in water source, rather than follow the seasonal pattern as they did by decreasing in the fall months.
- All data included in the MDHHS analysis were reported by laboratories directly to MDHHS, in accordance with State Law.

Differences in Analysis

- MDHHS data provides a much more robust picture of the entire blood lead levels for the Flint area, and specifically, accounts for data over the full course of the past five years.
- Looking at the past five years as a whole provides a much more accurate look at the seasonal trends of lead in the area.
- Seasonal exposure is higher in the summer for a variety of reasons including children playing outside in the soil, and when windows are open and lead paint is more likely to be in the air. This seasonal increase would be unrelated to the water system.
- Our data includes children from the entire city, including all medical facilities, rather than just Hurley, has a larger age group of children, and includes a much larger sample size.
- The MDHHS analysis looks specifically at the first elevated blood lead level for each child, which provides an accurate picture of when first exposure occurred.
- The Hurley data includes a smaller sample size, much more limited time period (January-September of 2013 and 2015 only), and a smaller age group of children.

WIC Children

- In homes with infants on WIC, if the household has documentation from an official source of unsanitary water supply issues, that family may be eligible to receive ready-to-feed formula. Families should contact WIC to see if they are eligible.
- Each household would have to be looked at on an individual basis.
- WIC cannot cover bottled water.

From: Anderson, Madhu (DEQ)
Sent: Wednesday, December 09, 2015 3:57 PM
To: [redacted]
Cc: Chris Kolb; Ken Sikkema ([redacted]; [redacted] Wyant, Dan (DEQ); Baird, Richard (GOV); [redacted]
Subject: Requested Emails
Attachments: DWSD back up agreement; FW: Proposed Water Monitoring - City of Flint; Re: Proposed Water Monitoring - City of Flint; RE: Proposed Water Monitoring - City of Flint; SCAN1458.pdf; Re: Proposed Water Monitoring - City of Flint; Proposed Water Monitoring - City of Flint

Dr. Lawrence, I have attached to this correspondence all emails and replies exchanged between Mike Glasgow and Flint Water Department/Staff with Michigan DEQ staff between the dates of April 13 and April 30, 2014, as requested.

I apologize for the length of time it has taken to get these to you. Please let me know if we can provide any other information.

Madhu R. Anderson
Deputy Director, Economic and Strategic Initiatives
☎ 517 284 6702 | [redacted]
✉ andersonm30@michigan.gov

DEQ

From: Daugherty Johnson [djohnson@cityofflint.com]
Sent: Thursday, April 24, 2014 12:03 PM
Subject: DWSD back up agreement

Hello Steve and Mike. As you are aware, the City has undergone extensive upgrades to our Water Treatment Plant and it's associated facilities. Our intentions and efforts have been to operate our facility as the primary drinking water source for the City of Flint. Through consultation with your office and our engineering firm we've developed a system of redundant electrical systems, treatment processes and adequate finished water storage to negate the need for a signed back up agreement with DWSD due to their termination of our contract. Upon inspection of these facilities would you convey your concurrence that there is no regulatory requirement for us to sign a back up agreement with DWSD.

Thank you
Daugherty Johnson
Utilities Administrator
City of Flint

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, April 16, 2014 1:01 PM
Subject: FW: Proposed Water Monitoring - City of Flint

Adam Rosenthal, EQA
MDEQ – Office of Drinking Water and Municipal Assistance
Lansing District – Constitution Hall 1SW
PO Box 30242
Lansing, MI 48909
517-284-6644
fax: 517-241-3571

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Wednesday, April 16, 2014 12:59 PM
To: Rosenthal, Adam (DEQ)
Subject: Proposed Water Monitoring - City of Flint

Adam,

Good afternoon, I am contacting you in regards to possible changes in our monitoring for our change to full time operation out of the Flint river. I am expecting changes to our Water Quality Monitoring parameters, and possibly our DBP and lead & copper monitoring plan. Also, I am wondering about our MOR required testing. I know you have probably been in contact with Howard Croft, however I have not seen anything except the notes you or Prysby made on the last page of our 2014 monitoring schedule "that things were subject to change". Any information would be greatly appreciated, because it looks as if we will be starting the plant up tomorrow and are being pushed to start distributing water as soon as possible. As the acting F-1, I would like to make sure we are monitoring, reporting and meeting our requirements before I give the O.K to start distributing water.

Thanks,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant
(810)787-6537 ext. 3512

From: Michael Glasgow [mglasgow@cityofflint.com]
Sent: Thursday, April 17, 2014 11:05 AM
Subject: Re: Proposed Water Monitoring - City of Flint

Adam,

Thank you for the quick response. I assumed there would be dramatic changes to our monitoring. I have people above me making plans to distribute water ASAP. I was reluctant before, but after looking at the monitoring schedule and our current staffing, I do not anticipate giving the OK to begin sending water out anytime soon. If water is distributed from this plant in the next couple weeks, it will be against my direction. I need time to adequately train additional staff and to update our monitoring plans before I will feel we are ready. I will reiterate this to management above me, but they seem to have their own agenda.

Thank you,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant

On Wed, Apr 16, 2014 at 2:49 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Mike, we have been working on a revised schedule for the City of Flint, which is being sent out today in response to your email indicating the plant startup. Mike Prysby must have been the one in contact with Mr. Croft, not sure what was discussed. Mike is out and will return 4/21/14. Until then our supervisor, Steve Bush, can be contacted at [redacted] or plant operation questions.

see attached schedule.

Adam Rosenthal, EQA

MDEQ – Office of Drinking Water and Municipal Assistance

Lansing District – Constitution Hall 1SW

PO Box 30242

Lansing, MI 48909

517-284-6644

fax: 517-241-3571

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To: Rosenthal, Adam (DEQ)
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Thanks,

Mike Glasgow

Laboratory & Water Quality Supervisor

City of Flint Water Plant

(810)787-6537 ext. 3512

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, April 16, 2014 2:50 PM
Subject: RE: Proposed Water Monitoring - City of Flint
Attachments: 2014 Flint MS startup.doc; 2014 Flint revised MS-SBrev.doc; Flint MS Enclosure.doc

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see attached schedule.

Adam Rosenthal, EQA
MDEQ – Office of Drinking Water and Municipal Assistance
Lansing District – Constitution Hall 1SW
PO Box 30242
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517-284-6644
fax: 517-241-3571

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Sent: Wednesday, April 16, 2014 12:59 PM
To: Rosenthal, Adam (DEQ)
Subject: Proposed Water Monitoring - City of Flint

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Thanks,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant
(810)787-6537 ext. 3512

2014 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

Collect samples early in the monitoring period. This schedule reflects your expected routine monitoring and is subject to change. To receive credit for monitoring, include the **WSSN, Site Code**, and **County** on your request for analysis form. Collect Bacteriological and Automated Partial Chemistry samples close to the shipping time and send overnight delivery. Send all sample results to your Department of Environmental Quality (DEQ) district office unless you use the DEQ laboratory. Test codes, sample units, and costs are listed to help you complete the DEQ laboratory form. Prices are subject to change without notice. The DEQ laboratory is closed on state holidays.

Location: Plant Tap

Collect these samples at the entry point to the distribution system (after treatment, if applicable.)

Sample Type	# Samples/ Frequency	Collect Before	Site Code	Fee	Unit Number	Test Code
Automated Partial Chemistry	This DEQ lab scan includes nitrate, nitrite, fluoride, and sodium whose monitoring frequency requirements differ from one another. Before requesting analyses from a laboratory other than the DEQ laboratory, check with your DEQ district staff for the specific monitoring requirements.					
	1/3 months	**Quarterly**	TP001	$18.00	32	R
Volatile Organic Compounds	1/3 months	**Quarterly**	TP001	$100.00	36VO	CXVO
Complete Metals	1/36 months	**09/30/2014**	TP001	$102.00	36ME	CMET2
Arsenic	1/3 months	**Quarterly**	TP001	$18.00	36ME	CAS
Cyanide	1/3 months	**Quarterly**	TP001	$25.00	36CNa	CCN
SOC – Pesticides	1/3 months	**Quarterly**	TP001	$125.00	36PT	CXPT
SOC – Herbicides	1/3 months	**Quarterly**	TP001	$120.00	36HB	CXHB
SOC – Carbamates	1/3 months	**Quarterly**	TP001	$120.00	36LP	CXLP
Gross Alpha (Radiological)	1/3 months	**Quarterly**	TP001	Not performed at the DEQ Laboratory. A list of certified labs is at www.michigan.gov/DEQ. Select Water, Drinking Water, Community Water Supply, then Certified Labs under Programs and Activities.		
Radium 226 & Radium 228	1/3 months	**Quarterly**	TP001			
Water Quality Parameters	Bi-weekly	**Every 2 Weeks**	TP001	Various	Various	Various
Total Organic Carbon (TOC)	Pair/Monthly	**Monthly**	TP001	$35.00	36TO	CTOC
	Monitor for TOC in the source water before any treatment at the same time as monitoring for TOC in the treated water. These samples (source water and treated water) are referred to as "paired samples." Collect the treated water sample not later than the point of combined filter effluent turbidity monitoring and representative of treated water.					
Expanded SOCs						
Dalapon & Haloacetic Acids	1/12 months	**Between 04/01 and 09/30/2014**	TP001	$130.00	36HA	CXHA
Diquate	1/12 months	**Between 04/01 and 09/30/2014**	TP001	$150.00	36DQ	CXDQ
Endothall	1/12 months	**Between 04/01 and 09/30/2014**	TP001	$150.00	36EN	CXEN
EDB & DBCP	1/12 months	**Between 04/01 and 09/30/2014**	TP001	$70.00	36VO	CXEV

2014 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

Collect samples early in the monitoring period. This schedule reflects your expected routine monitoring and is subject to change. To receive credit for monitoring, include the **WSSN, Site Code**, and **County** on your request for analysis form. Collect Bacteriological and Automated Partial Chemistry samples close to the shipping time and send overnight delivery. Send all sample results to your Department of Environmental Quality (DEQ) district office unless you use the DEQ laboratory. Test codes, sample units, and costs are listed to help you complete the DEQ laboratory form. Prices are subject to change without notice. The DEQ laboratory is closed on state holidays.

Location: Distribution System

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	100/Monthly	**Monthly**	DIST	$16.00	30	BPTC
Chlorine Residual	DBP Monitoring Plan	Measure the residual disinfectant level at the same point and at the same time as the bacteriological sample and report the average to the DEQ.					
Lead Copper for Corrosion Control	Lead and Copper Sampling Pool	100/6 months	**Between 07/01 and 12/31/2014**	DIST	$26.00	36CC	CCUB
Water Quality Parameters	Representative Sites	25/Quarterly	**Quarterly**	DIST	Various	Various	Various
Total Trihalomethanes	DBP Monitoring Plan	8/3 months	**During February, May, August and November 2014**	See DBP Monitoring Plan	$65.00	36VO	CXTM
Haloacetic Acids		8/3 months	**During February, May, August and November 2014**	See DBP Monitoring Plan	$130.00	36HA	CXHA

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

April 16, 2014

Mr. Brent Wright
City Of Flint – D.P.W
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Revised Drinking Water Monitoring Schedule – 2014
Monthly Operation Reports
Siting Plans and Record Keeping

Monitoring Schedule:

Enclosed is your revised Drinking Water Monitoring Schedule for calendar year 2014 outlining the minimum requirements for your public water supply. Your schedule has been revised based on the City's intent to change the source of its drinking water from the Detroit Water and Sewerage Department to treatment of the Flint River utilizing the City's Water Treatment Plant. Collect samples early in the monitoring period of the year indicated on the schedule. If you use a private laboratory you are required to report the results to us within the first ten days of the month following the month that you received the results. To receive credit for monitoring, the **"WSSN"** (water supply serial number), the **"Site Code,"** and **"County"** must appear on the sample result. Bottles will NOT be mailed automatically. If you use the Department of Environmental Quality Laboratory, you can order bottles by calling 517-335-8184. Be certain of the United States Environmental Protection Agency sampling and analysis method requirements for hold times.

Please note that both distribution and entry point to the distribution system monitoring will increase upon plant startup.

Monthly Operation Report (MOR) Requirements:

The City shall submit MORs as required under Administrative Rule 1502 (R325.11502). In addition to plant operational data collected and as noted in the attached schedule, the City of Flint will be required to collect Total Organic Compounds (TOC) samples from the source and finish water on a monthly basis. You will also be required to collect Water Quality Parameters (WQPs) at your entry point every 2 weeks. The City must also demonstrate adequate contact time (CT) for disinfection in accordance with Administrative Rule 1505a (R325.11505a).

Disinfection By-Product Sample Siting Plans:

The City of Flint must return to routine standard monitoring of disinfection by-products, and a revised Disinfection & Disinfectants By-Product (DDBP) plan must be submitted, which identifies 4 additional sites, 8 sites in total, for routine quarterly monitoring. These sites must be selected in accordance with the Stage 2 DDBP Rule and supporting documentation must be submitted with the plan for review and approval by this office prior to monitoring.

Lead and Copper Monitoring Requirements and Site Sample Pool

This change in source also increases your distribution system monitoring for WQPs to 25 samples per 6 months and 100 sample locations for Lead & Copper for 2 consecutive 6 month rounds of monitoring. The City will need to expand its current sample site pool in accordance with the requirements of Administrative Rule 710a (R325.10710a). A list of the proposed sample site pool locations, including each site's Tier, sample category, service material, and building plumbing material, shall be submitted to this office for review and approval.

Record Keeping:

The City shall maintain all monitoring records in accordance with all applicable requirements under the Administrative Rules including Rule 720a (R325.10720a), Rule 1506 (R325.11506), and Rule 1507 (R325.11507).

The Michigan Safe Drinking Water Act requires certain reports to be submitted to this office each year. Please remember that cross connection reports and annual pumpage reports are due by March 31, and the **Consumer Confidence Report** is due by July 1.

Also enclosed is the document "2014 Monitoring and Reporting Requirements." This provides additional details about monitoring and reporting requirements. If you have any questions, please contact us by telephone or e-mail using the information below.

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

Enclosure

cc/encl: Mr. Robert Bisnick, City Of Flint
Genesee Co. Health Dept.

2014 Monitoring and Reporting Requirements

Please Monitor Early: Collect samples early in the monitoring period (month, quarter, year) of the year indicated on the schedule. Bacteriological and partial chemistry samples should be collected close to the shipping time and sent overnight delivery to assure sample holding times are not exceeded (30 and 48 hour hold times respectively). We also recommend avoiding mailing bacteriological samples immediately preceding or following a holiday because samples tend to exceed the 30 hour hold time. When this occurs, a repeat sample must be collected as soon as possible upon notification.

If you use a private laboratory please report the results to us within the first ten days of the month following the month that you received the results. A list of certified laboratories is available on request. If samples are not collected as indicated on your monitoring schedule, you will incur a monitoring violation and may also be subject to a fine. For information on the fines policy, visit http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Administrative Fines (under Laws and Rules).

To receive credit for monitoring, you must include the **"WSSN"** (water supply serial number), the **"Site Code,"** and the **"County"** when you submit samples for analysis. Site codes are listed on your monitoring schedule.

Special Instructions If You Use The DEQ Laboratory: Bottles will NOT be mailed automatically. To order bottles, call the DEQ Laboratory at 517-335-8184 or download the form EQP 2301 *Requisition for Water Sample Units* from www.michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining The Necessary Sampling Units, and 'test list'. Please note that the DEQ laboratory is closed on most state holidays. The DEQ laboratory prices are subject to change without notice.

Special Instructions For Automated Partial Chemistry, VOC and TTHM Samples: These sample bottles must be cooled and preserved during shipment to the laboratory. If you use the DEQ laboratory, you will receive the ice pack, acid dropper (if necessary) and small cooler when you request the bottles. Samples must be preserved correctly to be used for compliance purposes. To avoid resampling follow instructions contained with the sample bottle. If you would like more information, contact the DEQ lab, at 517-335-8184, or contact this office.

Cyanide: Previously, supplies that chlorinated the water were waived from monitoring for cyanide. The U.S. EPA now requires all supplies to sample the entry point for cyanide.

UCMR3 Monitoring: You may have monitoring requirements in 2014 under the third Unregulated Contaminant Monitoring Rule (UCMR3). The U.S. EPA will contact you directly if your water supply is required to monitor in 2014. A list of laboratories certified to analyze the samples collected for UCMR3 is available at http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/upload/lablist.pdf. Contact the U.S. EPA with questions.

Reminder if Lead and Copper Monitoring Due This Year: You must provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of the customer notice within 3 months after the end of the monitoring period. Water supplies that failed to distribute the Consumer Notice of Lead Results must include the following

statement in their CCR, "During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule." To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms (under Manuals, Forms & Brochures).

Annual Reports: Act 399 requires certain reports to be submitted to this office each year.

- The **Cross Connection Report**, due by March 31, describes the status of your local cross connection control program. Manufactured housing communities are exempt from this requirements until 2016.

  Each year, water supplies must submit a report regardless of whether a formal program has been implemented. If cross connections do not exist in your water system, indicate so on the report. Download the Cross Connection Report form from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, Reporting Forms (under Manuals, Forms & Brochures). Instructions are included with the form.

- The **Annual Pumpage/Usage Report**, due by March 31, is required of water supplies that do not submit monthly operation reports.

  A summary of water pumpage and water use must be submitted by each water supply that does not submit a monthly operation report. To manage our natural resources, pumpage data are compiled to determine water use demands in Michigan. Download the Annual Pumpage/Usage Report form from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, Reporting Forms (under Manuals, Forms & Brochures). Please be sure to indicate the appropriate units on the report (e.g. million gallons or gallons).

- The **Consumer Confidence Report**, due by July 1 to your customers, to your local health department and to this office.

  Electronic delivery methods may be used to distribute the CCR to bill-paying customers, provided they are direct. For more information on e-delivery, visit www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, Consumer Confidence Report Rule (under Laws and Rules).

Prysby, Mike (DEQ)

From: Daugherty Johnson <djohnson@cityofflint.com>
Sent: Thursday, April 24, 2014 12:03 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Howard Croft
Subject: DWSD back up agreement

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hello Steve and Mike. As you are aware, the City has undergone extensive upgrades to our Water Treatment Plant and it's associated facilities. Our intentions and efforts have been to operate our facility as the primary drinking water source for the City of Flint. Through consultation with your office and our engineering firm we've developed a system of redundant electrical systems, treatment processes and adequate finished water storage to negate the need for a signed back up agreement with DWSD due to their termination of our contract. Upon inspection of these facilities would you convey your concurrence that there is no regulatory requirement for us to sign a back up agreement with DWSD.

Thank you
Daugherty Johnson
Utilities Administrator
City of Flint

Prysby, Mike (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Thursday, April 17, 2014 11:05 AM
To: Rosenthal, Adam (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Re: Proposed Water Monitoring - City of Flint

Adam,

Thank you for the quick response. I assumed there would be dramatic changes to our monitoring. I have people above me making plans to distribute water ASAP. I was reluctant before, but after looking at the monitoring schedule and our current staffing, I do not anticipate giving the OK to begin sending water out anytime soon. If water is distributed from this plant in the next couple weeks, it will be against my direction. I need time to adequately train additional staff and to update our monitoring plans before I will feel we are ready. I will reiterate this to management above me, but they seem to have their own agenda.

Thank you,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant

On Wed, Apr 16, 2014 at 2:49 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Mike, we have been working on a revised schedule for the City of Flint, which is being sent out today in response to your email indicating the plant startup. Mike Prysby must have been the one in contact with Mr. Croft, not sure what was discussed. Mike is out and will return 4/21/14. Until then our supervisor, Steve Bush, can be contacted at 517-643-2314 for plant operation questions.

see attached schedule.

Adam Rosenthal, EQA

MDEQ – Office of Drinking Water and Municipal Assistance

Lansing District – Constitution Hall 1SW

PO Box 30242

Lansing, MI 48909

517-284-6644

17-241-3571

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Wednesday, April 16, 2014 12:59 PM
To: Rosenthal, Adam (DEQ)
Subject: Proposed Water Monitoring - City of Flint

Adam,

Good afternoon, I am contacting you in regards to possible changes in our monitoring for our change to full time operation out of the Flint river. I am expecting changes to our Water Quality Monitoring parameters, and possibly our DBP and lead & copper monitoring plan. Also, I am wondering about our MOR required testing. I know you have probably been in contact with Howard Croft, however I have not seen anything except the notes you or Prysby made on the last page of our 2014 monitoring schedule "that things were subject to change". Any information would be greatly appreciated, because it looks as if we will be starting the plant up tomorrow and are being pushed to start distributing water as soon as possible. As the acting F-1, I would like to make sure we are monitoring, reporting and meeting our requirements before I give the O.K to start distributing water.

Thanks,

Mike Glasgow

Laboratory & Water Quality Supervisor

City of Flint Water Plant

(810)787-6537 ext. 3512

From: Michael Glasgow [mglasgow@cityofflint.com]
Sent: Thursday, April 17, 2014 11:05 AM
Subject: Re: Proposed Water Monitoring - City of Flint

Adam,

Thank you for the quick response. I assumed there would be dramatic changes to our monitoring. I have people above me making plans to distribute water ASAP. I was reluctant before, but after looking at the monitoring schedule and our current staffing, I do not anticipate giving the OK to begin sending water out anytime soon. If water is distributed from this plant in the next couple weeks, it will be against my direction. I need time to adequately train additional staff and to update our monitoring plans before I will feel we are ready. I will reiterate this to management above me, but they seem to have their own agenda.

Thank you,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant

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see attached schedule.

Adam Rosenthal, EQA

MDEQ – Office of Drinking Water and Municipal Assistance

Lansing District – Constitution Hall 1SW

PO Box 30242

Lansing, MI 48909

517-284-6644

fax: 517-241-3571

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Wednesday, April 16, 2014 12:59 PM
To: Rosenthal, Adam (DEQ)
Subject: Proposed Water Monitoring - City of Flint

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Thanks,

Mike Glasgow

Laboratory & Water Quality Supervisor

City of Flint Water Plant

(810)787-6537 ext. 3512

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Wednesday, April 16, 2014 12:59 PM
Subject: Proposed Water Monitoring - City of Flint

Adam,

Good afternoon, I am contacting you in regards to possible changes in our monitoring for our change to full time operation out of the Flint river. I am expecting changes to our Water Quality Monitoring parameters, and possibly our DBP and lead & copper monitoring plan. Also, I am wondering about our MOR required testing. I know you have probably been in contact with Howard Croft, however I have not seen anything except the notes you or Prysby made on the last page of our 2014 monitoring schedule "that things were subject to change". Any information would be greatly appreciated, because it looks as if we will be starting the plant up tomorrow and are being pushed to start distributing water as soon as possible. As the acting F-1, I would like to make sure we are monitoring, reporting and meeting our requirements before I give the O.K to start distributing water.

Thanks,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant
(810)787-6537 ext. 3512

From: Baird, Richard (GOV)
Sent: Friday, October 31, 2014 11:52 AM
To: Darnell Earley
Subject: Re: Thank You!

Very good! Lets get together after the election. Great work!

Sent from my Verizon Wireless 4G LTE DROID

Darnell Earley <dearley@cityofflint.com> wrote:

Good Morning Rich:

Just as an FYI, we had a very productive meeting. If you would like a briefing, please give me call.

Have a good weekend!

Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

---------- Forwarded message ----------
From: **Darnell Earley** <dearley@cityofflint.com>
Date: Fri, Oct 31, 2014 at 11:43 AM
Subject: Thank You!
To: wyantd@michigan.gov
Cc: Dayne Walling <dwalling@cityofflint.com>, "Workman, Wayne (TREASURY)" <workmanw@michigan.gov>, "Byrne, Randall (Treasury)" <ByrneR1@michigan.gov>, "Koryzno, Edward (Treasury)" <koryznoe@michigan.gov>, Kelly Rossman-McKinney <krossman@truscottrossman.com>, Elizabeth Murphy <emurphy@cityofflint.com>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>

Good Morning Director Wyant:

I wanted to take just a moment to thank you and your team for travelling to Flint Wednesday to meet with me, the Mayor, and the Utilities Department staff.

Everyone on our end appreciated the opportunity to meet directly with you and your key staff at the DEQ. We all felt it was a very productive discussion of the many difficult issues facing the City of Flint not only during this transition, but as its own long-term, sustainable water supply and distribution system, leading towards full implementation of the KWA project. As you know Flint is slated to convert to the KWA water source well within the next 18 month timeline. Until that happens however, I think you would agree that we have an

excellent opportunity here to send a good, positive message about how the City is managing its water services, and working very closely with your office in the process.

As we discussed, an initial media hit from your office fairly soon would also help us build public confidence through stronger communication on how we are responding to the challenges we encounter, your department's support of our efforts to resolve them, and the resultant potability of the current water source. If there are other next steps you need from us regarding such a media release, please don't hesitate to contact me.

We look forward to our continued partnership in addressing these and other matters critical to environmental quality in the City of Flint and the State of Michigan!

Sincerely,

Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

From: Baird, Richard (GOV)
Sent: Saturday, March 07, 2015 8:45 AM
To: Muchmore, Dennis (GOV)
Cc: Clement, Elizabeth (GOV)
Subject: Re: Flint Water Meeting

Left you a voicemail. He represents a company that received medc grant and we think they may have a role to play in flint water problem. Company founders meeting with Harvey, Ambrose and somebody from Flint water department since they were going to be in Lansing on Monday anyway.

Sent from my Verizon Wireless 4G LTE DROID
On Mar 7, 2015 8:19 AM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:
What does Steve have to do with the Flint water situation? Am I hopelessly out of the loop on this?

On Mar 6, 2015, at 2:11 PM, Clayton, Stacie (GOV) <claytons3@michigan.gov> wrote:

> Just an FYI – the meeting Rich asked Harvey to arrange will be on Monday at 1pm in Lansing. Please see below. -- Stacie
>
> **From:** Clayton, Stacie (GOV)
> **Sent:** Friday, March 06, 2015 2:05 PM
> **To:** Hollins, Harvey (GOV); 'Gerald Ambrose'; 'Maxine Murray'; Thelen, Mary Beth (DEQ); Wurfel, Brad (DEQ); Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); 'Natasha Henderson'; Shekter Smith, Liane (DEQ)
> **Subject:** Flint Water Meeting
>
> Greetings All,
>
> Attached is a brief overview of the information to be presented on Monday at the 1:00pm meeting with Steve Linder of the Sterling Corporation regarding Flint Water. The meeting will be held at the Sterling Corporation's offices on 106 W. Allegan, Ste. 2 in Lansing. I have sent the appointment and here are the list of attendees:
>
> Harvey Hollins, Director, Governor's Office of Urban and Metropolitan Initiatives
> Gerald Ambrose, Flint Emergency Manager
> Natasha Henderson, Flint, City Manager
> Liane Shekter Smith, Chief, Office of Drinking Water and Municipal Assistance (DEQ)
> Stephen Busch, Office of Drinking Water and Municipal Assistance (DEQ)
> Brad Wurfel, Director of Communications (DEQ)
>
> <SomnioGlobal_Ozone disinfection technology.pdf>

From: Baird, Richard (GOV)
Sent: Wednesday, September 30, 2015 8:37 AM
To: 'Wurfel, Sara (GOV)'
Subject: RE: Flint water

This is great. Was not aware. Agree with coordination. I told Harvey I would call my contact on the board at Home Depot.

-----Original Message-----
From: Wurfel, Sara (GOV)
Sent: Wednesday, September 30, 2015 8:34 AM
To: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Agen, Jarrod (GOV); Baird, Richard (GOV)
Cc: Murray, David (GOV)
Subject: FW: Flint water

Please see below. Not sure what status of our outreach and plans on water filters is? Perhaps we were involved in this GM effort indirectly or directly already. That said, there may be value in combining or coordinating.

Let's talk, please. Want to make sure we're all on same page internally first.

Thanks!
SW

-----Original Message-----
From: Brian O'Connell [mailto:brian.oconnell@gm.com]
Sent: Wednesday, September 30, 2015 8:00 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint water

Sara,
We understand the Governor is going to make an announcement today about Flint water. Can you tell me anything? We are in the process of making a large donation to the community in support of water filters. We do not want to get cross with anyone. I will keep information confidential.

Sent from my iPhone

Nothing in this message is intended to constitute an electronic signature unless a specific statement to the contrary is included in this message.

Confidentiality Note: This message is intended only for the person or entity to which it is addressed. It may contain confidential and/or privileged material. Any review, transmission, dissemination or other use, or taking of any action in reliance upon this message by persons or entities other than the intended recipient is prohibited and may be unlawful. If you received this message in error, please contact the sender and delete it from your computer.

Flint grants talking points

- Gov. Rick Snyder has awarded Flint $2 million in grants for water system infrastructure improvements, part of an overall $8 million plan to help cities through the Financially Distressed Cities, Villages, and Townships Grant Program.

- Flint is among six municipalities receiving grants through the program.
    - Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.
    - Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability.
    - There was $8 million appropriated for the program with a $2 million cap, per local unit.

- A $900,000 grant will allow the city to hire a contractor to perform a leak detection survey of the city water lines.
    - The city will receive a map of leak locations and an assessment of leak severity, allowing the city to prioritize leak repair.
    - The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes.
    - The assessment will guide the city's water main replacement program.

- The city also was awarded $1.1 million to shut down its current Water Pollution Control Facility incinerator and replace it with new facilities which will allow for the disposal of waste in landfills.
    - The existing facilities are not up to federal Environmental Protection Agency standards.

- These are opportunities for the state government to assist Flint city leaders as they address issues related to the city's water system.

Flint water talking points from DEQ

- The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.

- Municipal water supplies are tested rigorously and regularly for more than 90 regulated contaminants, including microbial contaminants that pose an immediate public health concern.

- Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.

- TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of several decades of exposure.
    - The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.

- The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.

- The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.

- Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ.

From: McNeely, Jacques (DTMB)
Sent: Friday, March 06, 2015 9:59 AM
To: Hollins, Harvey (GOV)
Subject: RE: Tap Filters

Thank you sir !

From: Hollins, Harvey (GOV)
Sent: Friday, March 06, 2015 9:48 AM
To: McNeely, Jacques (DTMB)
Subject: Fwd: Tap Filters

Fyi

Best,
Harvey

Begin forwarded message:

> **From:** "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
> **Date:** March 5, 2015 at 4:26:25 PM EST
> **To:** "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Wyant, Dan (DEQ)" <WyantD@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>
> **Cc:** "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>
> **Subject: FW: Tap Filters**
>
> Harvey,
> Since group call Tuesday I have been working out how the filter idea might take shape.
>
> To reiterate some key points so we're all clear:
> 1. DEQ does not inspect individuals' homes in a situation like this. It's the city's system, their operators handle all complaints and maintenance. In fact, our folks alerted me that the city's got union rules in place forbidding any contractor from touching the system.
> 2. DEQ's role is limited to ensuring the plant is operating to state standards and the water it produces meets potability standards. The aesthetic issues drawing concern from residents – color, odor, taste – stem from a variety of things. Age of the system and prolonged lack of upkeep is the leading factor. But in some areas, another contributing factor is changes in water flow – source used to come from the south, now comes from the north, so some pipes are flowing in reverse, stirring up whatever was settled for a long time. In some sections, large pipes that historically served large communities are now serving a much smaller customer base, contributing to water stagnating in the system. In some areas, household connections are old and worn, so two neighbors may be having dramatically different experiences. My point is, the challenge takes many forms and there's no single solution that will bring sweeping change. The two consultants hired by the city have, as I understand it, both reinforced this idea in their assessments, so that's good.

3. The fix for this will be years in the making, truly. Even if full funding were available, 'big dig' projects can't all happen at once. The city needs to get an assessment of its infrastructure so it can prioritize its needs, and I understand they're working on that. In the near term, maintenance this spring / summer – things like cleaning the pipes in key sections and flushing the system via the hydrants – could offer some short term results. I know nobody wants to just wait for spring, but that is something important to keep in mind.

4. In the meantime, the group discussed possibly making home water filters available somehow. The National Safety Foundation is a Michigan company, headquartered and founded in Ann Arbor, that develops standards for all kinds of infrastructure. They're a globally recognized source for standard setting. A look at their site reveals there are myriad filtration options on the market and within each type (faucet mounted, whole house line filters, etc) there are filters that focus on different aspects of purification.

   If this idea begins to get legs, I'd suggest testing some different models on the local water at the customer level to see if they work. I'd also suggest the idea be focused on tap-mounted models to promote clean, appealing drinking water. And I'd suggest this program could be funded in whole or in part by the state, but would need to be administered by the city (reinforcing the fact that they own, operate and service the system). I've got some information on filter models below.

   Two more considerations: One, while the state has provided residents in some communities with bottled water in the past, it always has to do with their water being somehow contaminated – as in, some kind of chemical plume that impaired local drinking water sources. This would be the first time the state took steps to deal with what is an aesthetic issue on a system where the water is meeting state drinking water standards.

Water filter info:
ANSI NSF Standard 42 Covers bacteriostasis, taste and odor (associated only with chlorine removal), and other aesthetic conditions
http://standards.nsf.org/apps/group_public/download.php/19895/NSF_42-11%20-%20watermarked.pdf

ANSI NSF Standard 53 Covers health effects removal
http://standards.nsf.org/apps/group_public/download.php/19896/NSF_53-11a%20-%20watermarked.pdf

It is important to note that the filters are not required to meet all aspects of the standard, only the portions they want to make claims for. So product information for each filter must be reviewed to determine its applicability.

Most of these point of use filters are basic activated carbon filters that simply remove taste and odor specifically associated with chlorine, not other things like iron, manganese, hydrogen sulfide, etc. that can also impact taste and odor as well as color.

It is important to recognize that taste and odor is generally an individual preference and such standards have for the most part not been developed because groups of individuals may still consider taste and odor issues to exist even after levels for such a standard have been met.

Other considerations are that the test water for such filters attempting to meet the standard uses hardness levels of 170 mg/L or less. Flint's water at times may be above this level, which could then impact filter performance and longevity.

Most of these filters are designed to be replaced after 100 gallons or less of use, a period of about 3 months for most households. In addition the tests allow for initial pressure drops of up to 15 psi. This may limit use in households that already rely on minimum pressure within their household plumbing.

Regarding the health effects standards, as the Flint water system already meets such requirements, with the exception of the current TTHM locational running annual average, there is little point to the use of these filters for such a purpose.

To the point you'd asked about the other day, while Flint and Detroit are leading examples of unmaintained infrastructure, Flint is not alone by any means.

This recent infrastructure report card
http://www.infrastructurereportcard.org/michigan/michigan-overview/
Lists Michigan with a $13.8 Billion need over the next 20 years.

http://www.infrastructurereportcard.org/a/#p/state-facts/michigan

Here's a link to the 2009 Report Card for Michigan Infrastructure
http://www.michiganreportcard.com/

From the report:

"A significant portion of the state's primary distribution system is nearing 100 years old. CWS are facing a significant challenge to maintain the vast network of aging, underground infrastructure. Within the city of Detroit alone, approximately 80% of its distribution piping was installed prior to 1940, which is not unusual for CWS in Michigan."

"The age of the majority of the state's distribution system is the primary contributor to normal decay and failure. In many cases, pipe life has far exceeded useful service life. Much of the older water systems consist of undersized mains constructed of materials such as unlined cast iron pipe. Minor fluctuations in system flows or pressure may cause red water complaints and even result in pipe failure. All CWS should have routine flushing and valve maintenance programs; however many are hesitant due to the time and cost."

"Under the Stage 2 Disinfection Byproducts Rule, all CWS that disinfect are required to provide increased trihalomethane (THHM) and haloacetic acid (HAA5) monitoring due to the potential byproducts of chlorine reactions within the pipe system. Corrosion, scale, solid suspension on the interior sidewall of pipe, in addition to the age and condition of the system will require diligent rehabilitation investment to maintain system integrity."

"While better materials and advanced technology is available to replace the aging distribution system, resources remain scarce when compared with the magnitude of the

rehabilitation task at hand. Too often, distribution system replacement costs are underfunded and the first item to be slashed when budget problems arise. Overall, distribution system maintenance is reactionary in much of the older systems. Since the majority of the antiquated system will require removal and replacement beyond the CWS funding resources for systematic upgrade, a reactionary rehabilitation program is inevitable and must be funded accordingly."

Call or email me if you need anything further.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]cell

From: Wurfel, Brad (DEQ)
Sent: Friday, March 13, 2015 6:11 PM
To: Hollins, Harvey (GOV)
Cc: Wyant, Dan (DEQ)
Subject: Info download per our conversation
Attachments: Launch_and_Retrieval_Methods.pdf; OTsp07_TB.pdf; PotableWaterSeweragePipeLines.pdf; PPP_General_Brochure.pdf; USG Advanced Pipe Cleaning (Ice Pigging).pdf; 0707_036.pdf; 150207_155445_COLLAGE-1.jpg

Importance: High

Harvey,
We've got two issues I wanted to update you on. After trying to do this all in a single email, I realized it gets messy. So this is the first of two.

The water quality question remains under consideration. I've had a couple meetings this week with our drinking water team. I will circle back and push them for a specific recommendation on a good retail filter. Thus far, they've presented a range of options and been uncomfortable going past that because a) we don't specialize in home filtration. We're in charge of commercial / municipal size systems. And b) most filtration systems remove contaminants and toxics and organics. There's no way to know for sure if a faucet model will effectively work on odor or color issues until someone installs it and tries it out. For that, we'd need a home that has reported discolored / smelly water. And for that, I'd imagine we'd need to connect with the city and see if they've got logs of residents who have made these complaints.

The other potential help that could come from the state -- and after conversations with our folks I maintain it might be the best help we can give them -- has to do with maintenance. Of the $2 million announced in January from Treasury, $900,000 was earmarked for developing a maintenance triage plan. As that comes together, the next step will be actual maintenance. This means replacing valves and rotten sections of pipe, but it also means "pigging" lines with an inline device that runs through water transmission lines and forces out any built-up… material. In coordination with bleeding stagnant water via hydrants, this would probably be the fastest, most effective way to address the discolored / odorific water.

Our department specialists working with Flint imparted in an internal meeting this morning that the city has been a little reticent to pig their lines because the system is in such a condition that they worry a valve opened won't close (and vice versa), and a line that is barely still functional might get blown by the pigging. Our position is that would be preferable – maintenance, after all, is about addressing those very situations. But if funding can be identified, through SOM or some foundation benefactor, and we can convince the city to tackle the work, this would be a great way to spend it. The PDF files enclosed offer some more information about what this is, how it works, etc.

I'm still working to get a report of all the local municipal violations over the past two years. The two staff in the drinking water division who run those database searches are out of state this week, in Florida and Alaska respectively. Division assures me they'll get that report run as a priority upon return of those folks next week. In the meantime, here are some images (the Jpeg titled COLLAGE). It shows various conditions, mostly at mobile home parks around the state, where the water system has failed. May or may not be of use, but if nothing else it exemplifies that this stuff happens, much as we try to make sure it does not.

This is email one of two. The other issue I will present in the next email. If it is at all possible, I'd suggest we need to assemble Treasury, MDCH, DEQ and Ambrose + RS team sometime Monday to get everyone briefed on what each agency is doing in Flint right now and what we may need to do next. Don't know if that meeting gets called by you or Dennis, but I think you and I agree that we need a united, coordinated team approach to develop quickly.

Thanks,
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted] cell

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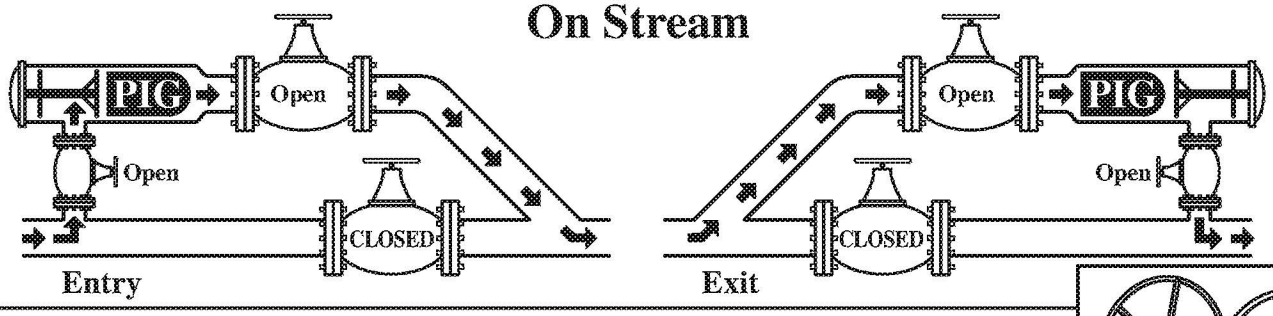
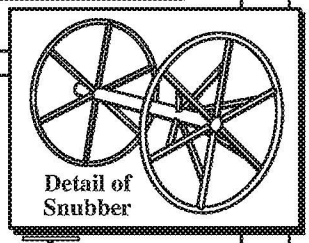
LAUNCH & RETRIEVAL METHODS

On Stream





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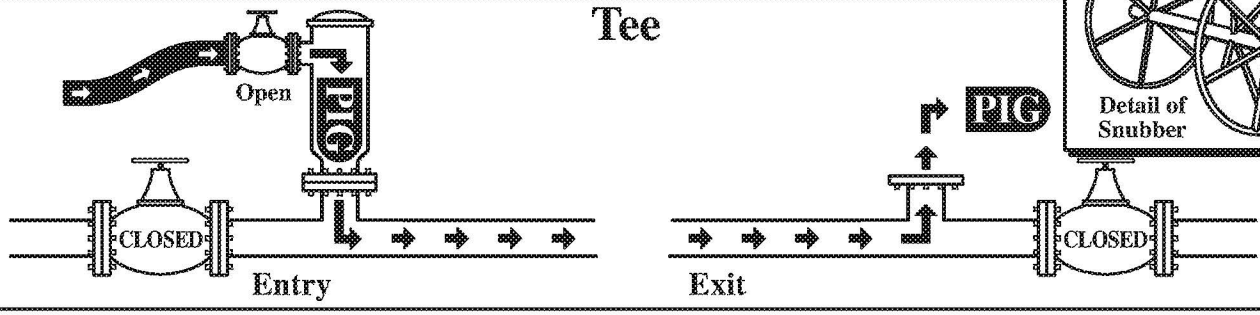
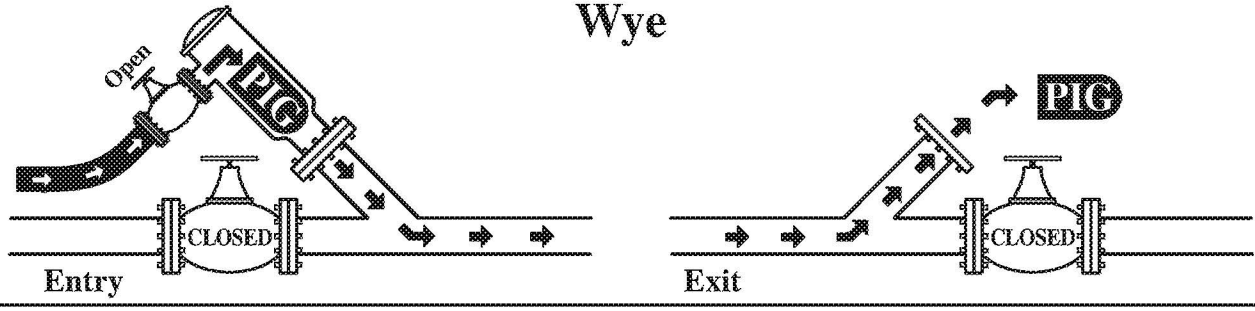


Wye



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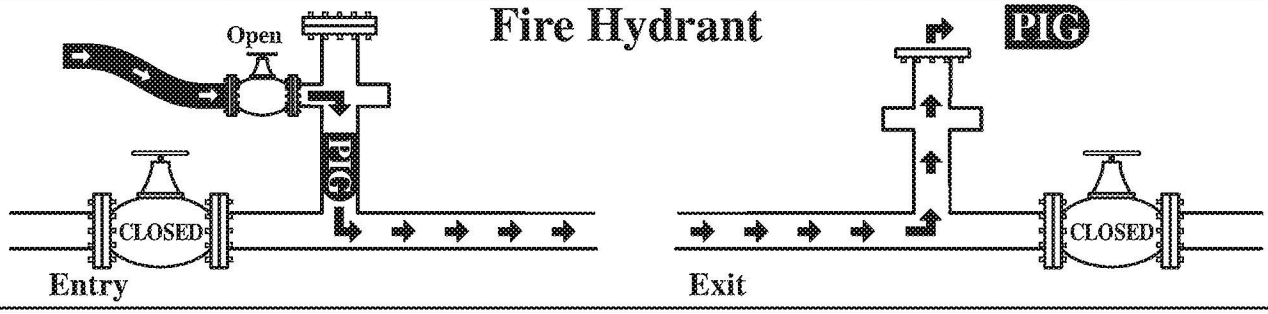
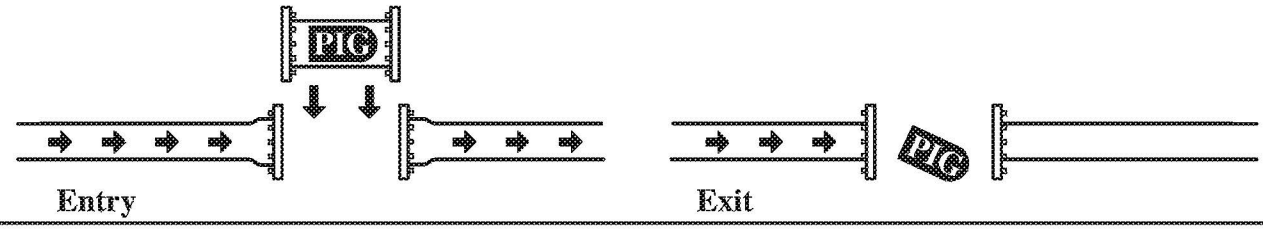


Oversized Spool Piece



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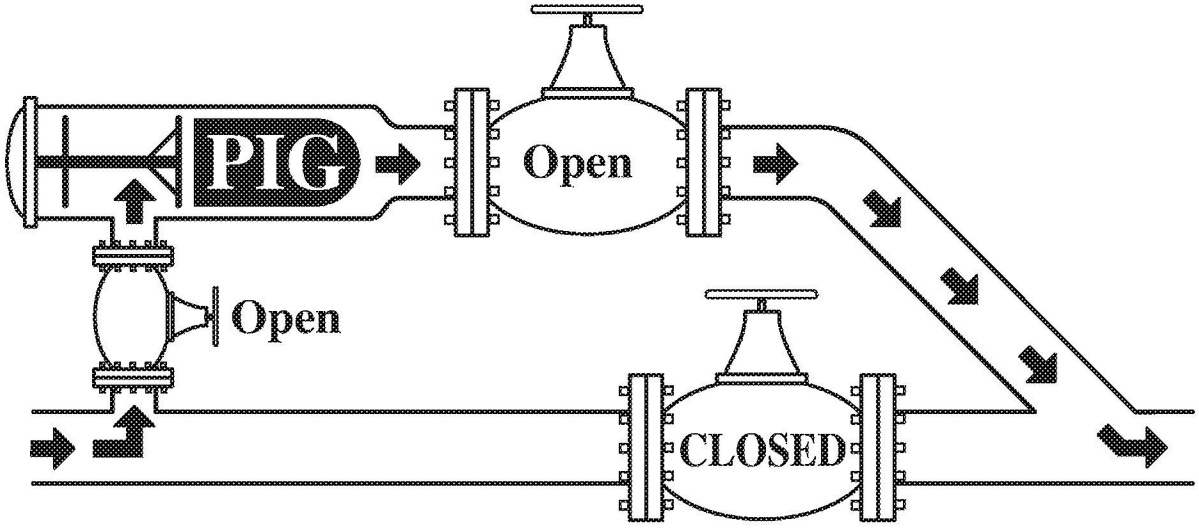
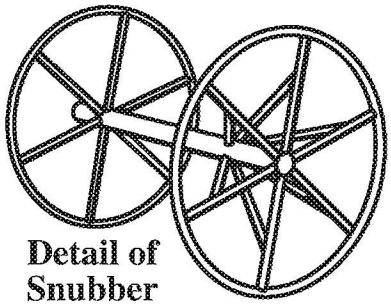
LAUNCH & RETRIEVAL METHODS

On Stream Entry





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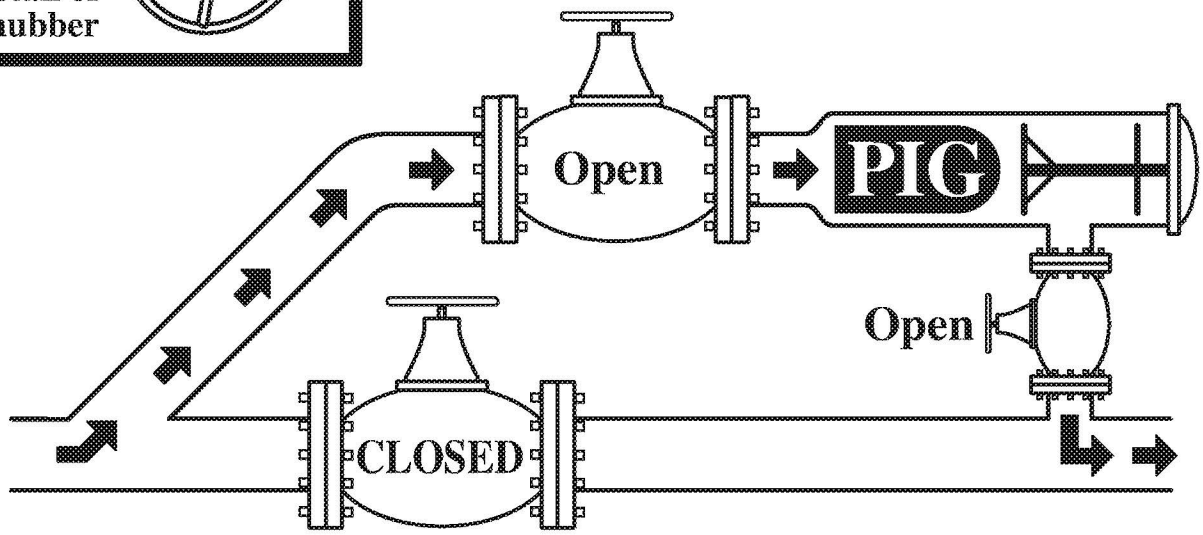

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Tech Brief
PUBLISHED BY THE NATIONAL ENVIRONMENTAL SERVICES CENTER

Line Pigging

By **Zane Satterfield, P. E.**, NESC Engineering Scientist

Summary

Line pigging is an internal pipe-cleaning process used to remove biofilms or other foreign matter from the inside of water pipes. If performed correctly, line pigging will renew the flow rates to restricted piping systems and reduce pumping pressures. This Tech Brief discusses some of the techniques and processes used in cleaning waterlines in distributions systems.

Line Pigging

Line pigging (or line swabbing, as it sometimes known), is the process of cleaning distribution lines by inserting a small device known as a pig into the lines and pushing it through them. The term "pigging" originated in the gas and oil industry, where metal discs connected by a rod were moved through the oil pipelines to remove buildup of paraffin wax on the internal wall of the pipe. The action of metal on metal made a squealing noise like a pig and the name stuck. More and more, pigs are being used to clean pipelines in all types of industry including waterlines in municipal distribution systems.

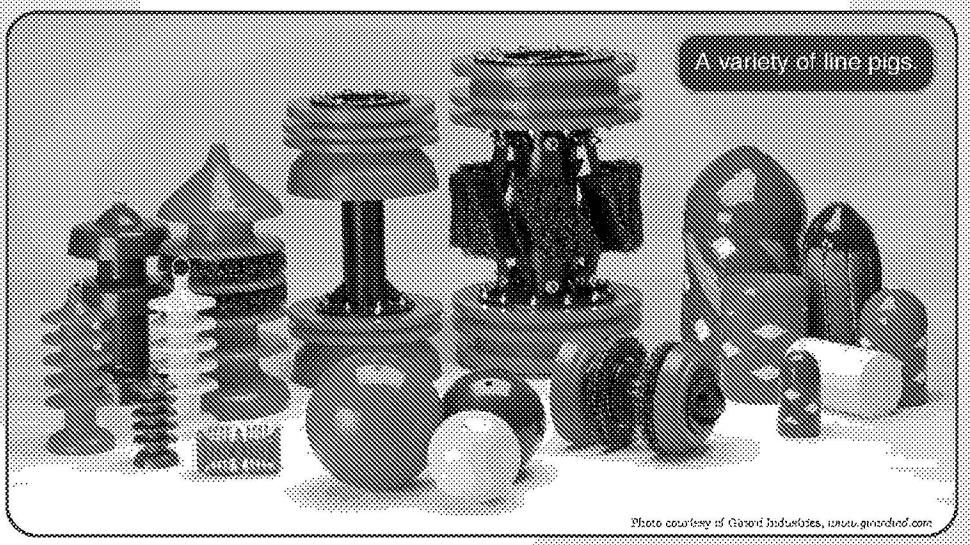
What is a pig?

A pig is the object, usually bullet shaped, that is pushed by the water in the pipe in the direction of normal flow. The pig can be made of different materials (foam, steel, plastic, polyurethane), but generally is food-grade silicon, which is tough yet flexible and safe to be in contact with drinking water.

Pigs range in size from 2- to 48-inches in diameter and can be made to order in varying lengths, styles, and configurations for specific applications. Not only are pigs used for cleaning but also for inspecting the inside of pipelines and determining interior dimensions.

Is pigging waterlines really necessary?

States and municipalities typically do not require regular pigging or swabbing of distribution lines in water systems. Some may only require pigging after initial construction of a new line to remove any debris left in the line because flushing alone will not always clean the dirt and debris out of the line.



A variety of line pigs

Photo courtesy of Girard Industries, www.girardind.com

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www.nesc.wvu.edu/ndwc/ndwc_tb_available.htm

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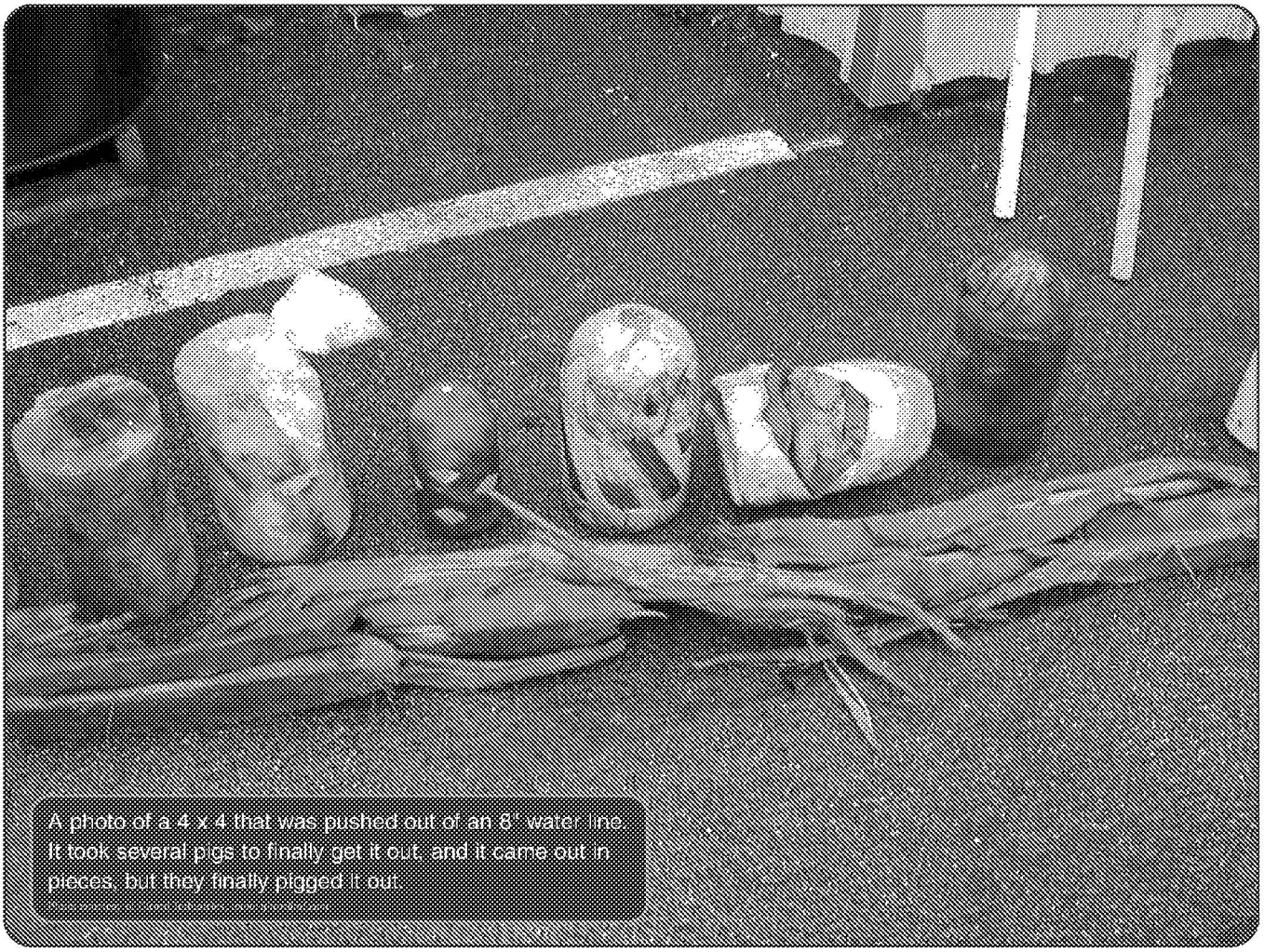

A photo of a 4 x 4 that was pushed out of an 8" water line. It took several pigs to finally get it out, and it came out in pieces, but they finally plugged it out.

One reason to pig a waterline is that all distribution lines tend to have a biofilm coating the inside of the pipe. The bacteria are dormant until certain conditions activate the bacteria, causing problems. Regular flushing will not eliminate this biofilm. Regular pigging with flushing will reduce or eliminate biofilms.

A second reason to pig a line is inadequate water flow. More flow (volume) of water may be needed to support development or a growing population in the water system or to provide adequate water for fire fighting. In areas of water systems where increased development has caused water demand to surpass the flow output of an existing line, the system will usually need to replace the existing waterline with a line that can support the demand needed. If the existing flow is restricted due to excessive deposits, however, pigging may be the solution to the problem.

Third, most states require a minimum of a 6-inch diameter waterline when connecting a fire hydrant to provide adequate flow. After years of service, the inside of the pipe can become restricted with deposits making the fire hydrant less effective if not useless for its intended job. If fire flow is needed, the solution in the past has been to replace the whole waterline, which is very costly and time consuming. Pigging may restore adequate flow for fighting fires at a fraction of the time and cost.

Finally, pigging waterlines may lessen complaints from water customers regarding the very same deposits that have or can restricted fire flow. These deposits are unwanted foreign matter such as iron oxide (red water), alum, calcium carbonates, barium sulfide and sediment. Pigging, in most cases, provides a solution. Cleaning these deposits can also reduce pumping pressures in areas of water systems that have booster pump stations. Increased pumping pressures can result in line leaks and pipe failures.

Procedure

The procedure starts by determining if the waterline can be pigged. Not every water line is a candidate for line pigging. Is the water line so corroded that pigging can cause failure?

Does the waterline have reducers (i.e., the line getting smaller) that can cause the pig to get stuck? Does the line have increased pipe diameter sizes where the water pressure would be insufficient to move the pig?

One of the main things to look at is the condition of the interior of the pipe. If the pH of the water is low, the interior of the line could be so corroded that pigging could result in failure. If in doubt about the condition of the line, refer to past line repairs or talk to operators who have worked on any repairs of the particular line.

Much of this information can be obtained from as-built drawings or operators who have fixed leaks or installed the original water line. The line will have to be dug up to launch the pig. At that time, a visual inspection should be done to determine if pigging is possible. Another option is to use a low density foam pig in any unknown line and examine the foam pig for wear patterns, tears, or gouges. This may even help determine if the line can be successfully cleaned with a pig.

Before the pigging begins, it's useful to have information about the line:

1. Locate and mark all valves and meters.
2. Approximate all elbows and fittings in the line (again, refer to the as-built drawing if available).
3. Know the pressure and flows in the lines. This will also help determine if any flow increase and possibly pressure decrease was achieved by the pigging.

The more you know before you start, the fewer surprises you'll encounter once you start pigging.

Once the line has been inspected and appears suitable, the actual pigging begins. A pig is inserted into the line to be cleaned by means of a launcher. This is simply an oversized barrel with a reducer mating to the existing line. This allows for easy insertion of the pig, because the pig's outer diameter is larger than the pipe's internal diameter to maintain a good seal. Once in the launcher, clean water is introduced to send the pig on its way. This is usually the same water that is in the line from a nearby flushing hydrant or fire hydrant, or a tanker truck. The pig's path is determined by direction of flow and by isolating the line to be cleaned by closing valves to laterals, if present.

If the waterline is in service, you must notify your customers about the water interruption and possible dirty water after bringing the line back in service. If the water line has a lot of unwanted deposits, it may be wise to pull all water meters just before the pigging process starts and flush at the connection at the end of the process before you replace the meters. Foreign matter could stop-up the meter or cause the meter to malfunction. The debris could also get into the customers' plumbing and cause problems such as plugging the aerators on the faucets, dishwashers, or washing machines.

If the waterline to be pigged has severe scaling (tuberculation) due to iron oxide (red water), alum, calcium carbonates, barium sulfide, or sediment, a progressive or stepped approach must be taken to avoid getting a pig stuck or losing a pig. This approach is simply using a smaller diameter pig at first and working your way up incrementally to the inside diameter of the pipe. The stepped technique will minimize the risk of the pig getting stuck or large amounts of debris plugging the line by cleaning a little bit at a time.

Articles about locating distribution lines and valve exercising programs are available on the National Environmental Services Center Web site at *www.nesc.wvu.edu/ndwc*.

Smart Pigs

There are many different types and sizes of pigs. For waterline use, some nonstandard pigs include:

- Gauging pigs are mainly used after constructing the pipeline or before pigging an old line to determine if there are any obstructions in the pipeline.
- Profile pigs are gauging pigs with multiple gauging plates used to help map the inside condition of the pipe walls.
- Magnetic cleaning pigs are used to pick up ferrous debris left in the pipeline.
- Transmitter pigs or detector pigs are used to map out the location of pipeline or help locate a stuck pig.
- Spheres are round for ease in negotiating short radius 90-degree elbows, irregular turns, bends, and sweeps.

Dealing with a Stuck or Lost Pig

If a pipeline has not been pigged on a routine basis or has never been pigged, a pig can get stuck. If a pig becomes stuck, the first priority

A pipeline prior to line pigging.

is to find and retrieve it, but you must identify the cause. Usually one of two conditions exists when a pig is stuck: fluid bypassing around the pig (not pushing the pig) or a blockage of the flow.

In water distribution systems that have loops and multiple tee connections a pig can find its way out of the work area and get lost. It is important to locate all valves and close off the lines that are not being pigged and know the direction of water flow.

If you lose a pig, a smart pig such as a detector pig or transmitter pig can be launched to help find the lost pig. A transmitter can also be installed in the cleaning pig so that a second pig does not have to be launched to help locate it if it should get lost or stuck. Sometimes a pig gets stuck because of a broken or shut gate valve.

Procedures for dealing with a stuck pig or fluid going around the pig:

1. Increase the line pressure and flow rate, but do not exceed the safe limits of the pipeline allowing for age and/or condition of the line. The flow rate and pressure can be increased with a pumper and tanker fire truck.
2. Release pressure from the line and drain the line back toward the launcher. Releasing pressure allows the pig to relax to its normal shape and may even cause the pig to back up in the line. After pressure has dissipated completely for several minutes, re-pressurize the line in an attempted to drive the pig through the restriction. This may be repeated two or three times.
3. For a bypass situation, run a soft swab in behind the stuck pig to try and create a positive seal, stopping the bypass. Repeat step one above.
4. Back the pig up by applying pressure from the opposite end of the waterline using a pump or possibly a pumper fire truck.
5. If a foam pig is used and gets stuck a super-chlorinate mixture (3,000 to 5,000 ppm) in a slug form can be used to dissolve the pig. The line must be flushed and tested to be sure the chlorine residual is allowable limits after the super chlorination.

Water systems are advised not to undertake line pigging on their own. Shop around and find a reputable company with experience in line pigging with water lines. Start with an area of the water system that the line location, size, type, and condition are all known and the lines can be dug up easily if needed.

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Special thanks to Jim Burns of Girard Industries for his assistance.

NESC Engineering Scientist **Zane Satterfield** is a licensed professional engineer and previously worked for the West Virginia Bureau of Public Health, Environmental Engineering Division.

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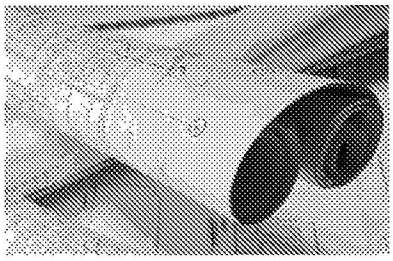


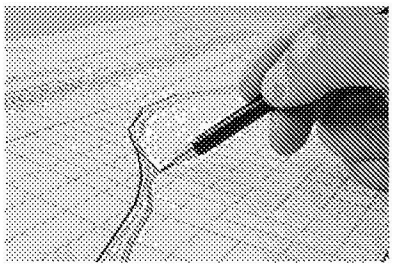
TECHNICAL SPECIFICATIONS FOR THE INTERNAL CLEANING OF POTABLE WATER AND SEWAGE PIPE LINES

EXECUTION:

•Pipeline shall be cleaned to remove most dirt, sludge, tuberculation and other foreign matter buildup from the interior wall of the pipeline. Equipment selected shall be capable of performing such cleaning. Satisfactory precautions shall be taken to prevent scratching or scraping of interior wall surfaces or other damage to pipes that might be inflicted by the improper use of cleaning equipment.

PIGGING:

•Prior to the use of plastic foam type pigs, a swab made of soft plastic foam shall be sent through the piping to insure that the piping systems fittings, valves and interior dimensions will allow the initial cleaning pig to pass through it without being trapped within the system. Upon examination of this initial swab, subsequent pigs of varying diameters and/or densities shall be sent through the piping system until desired results are readied.

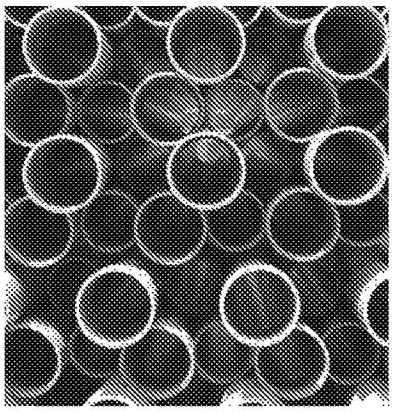


PIGS:

•Pigs shall be manufactured of an open cell polyurethane foam body. Densities may range between 1 1/2# per cubic loot up to 8# per cubic foot density. Some pigs may be wrapped with polyurethane spiral bands, as well as abrasives for longer life or removal of harder scale. Pigs should be able to pass through reduction of up to 60% to 65% of cross sectional area of nominal pipe. Pigs shall be able to traverse standard piping configurations such as 90° elbows, tees, crosses, wyes, gate valves, and ball valves.

CONTRACTOR REQUIREMENTS:

•Contractor shall submit evidence of qualifications to include a list of ten (10) projects of equal or greater scope. Project list shall state the following: dates, feet of pipe, project cost, location, contact person, telephone number. Qualification submittal shall include three (3) letters on client letterhead from stated contact person from the above list of ten (10) projects. All projects must have been completed within the last three years. All contractors must submit valid certification of training issued by an established pig manufacturer:



Pipeline Pigging Products

INCORPORATED

PIPELINE PIGGING PRODUCTS INDUSTRY EXPERIENCE, RESEARCH, KNOW HOW

Pipeline Pigging Products is a manufacturer of internal pipeline cleaners referred to in the trade as "Poly Pigs."

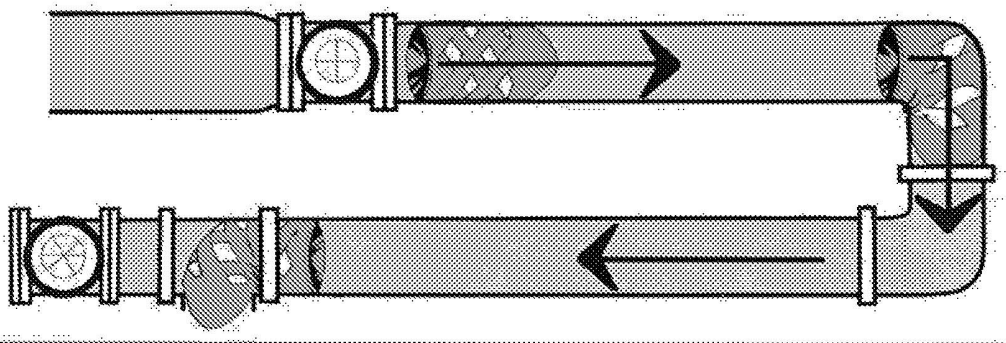
Constructed of flexible open cell polyurethane foam and various external wrappings, Poly Pigs have the ability to negotiate short radius bends, ells, tees, multi-dimensional piping and reduced port valves. The slightly oversized Poly Pig forms a "sliding seal" in the pipe, and is designed to remove product buildup, foreign matter and loose sediment.

A few of the benefits that Poly Pigs can offer are:

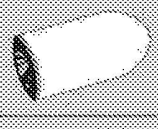
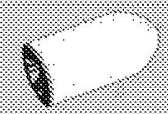
- Increased pipeline carrying capacity
- Improved product quality
- Power savings by reducing pump pressure
- Confirmation of pipe and flow integrity

Pipeline Pigging Products offers Poly Pigs in a wide variety of styles (drying, wiping and scraping) to accommodate almost any application, such as oil & gas transmission, municipal, petro chemical, pulp and paper and process piping systems.

With over 60 years of combined experience in manufacturing, research and application, our knowledge of Poly Pigs is unsurpassed in the industry.



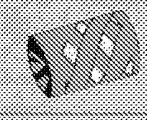
MUNICIPAL SERIES

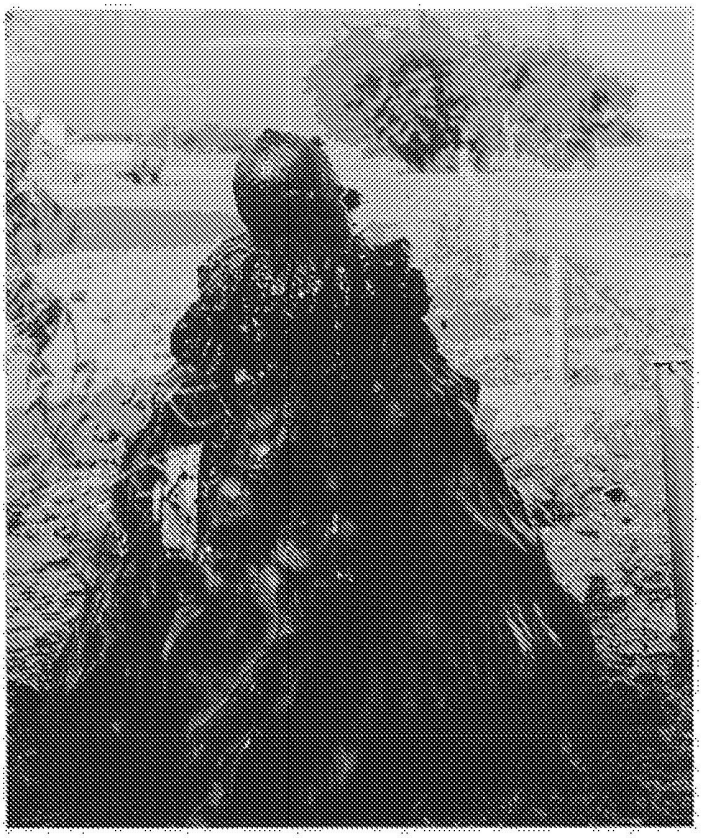
APPEARANCE	STYLE	TYPE	DENSITY	APPLICATIONS
	**B1**	Swab	1-2 lbs. cubic foot (16 - 32 Kg/M³)	Proving; Sweeping; Sealing
	B2*	Coated Swab	1-2 lbs. cubic foot (16 - 32 Kg/M³)	Light Wiping
	**B3**	Bare	5-7 lbs. cubic foot (80 - 112 Kg/M³)	Light Cleaning
	B4*	Coated	5-7 lbs. cubic foot (80 - 112 Kg/M³)	Cleaning
	B5*	Wire	5-7 lbs. cubic foot (80 - 112 Kg/M³)	Scraping

***Available with Rotating Pattern** (see back page)

APPEARANCE	STYLE	TYPE	DENSITY	APPLICATIONS
INDUSTRIAL SERIES				
	C3	Bare	8-10 lbs. cubic foot (128 - 160 Kg/M³	Heavy Duty Drying
	C4*	Coated	8-10 lbs. cubic foot (128 - 160 Kg/M³	Heavy Duty Wiping
	C5*	Wire	8-10 lbs. cubic foot (128 - 160 Kg/M³	Heavy Duty Scraping
	C6*	Carbide (Strap)	8-10 lbs. cubic foot (128 - 160 Kg/M³	Heavy Duty Scraping
	RX3	Bare	5-7 lbs. cubic foot (80 - 112 Kg/M³	Regular Duty Drying
	RX4*	Coated	5-7 lbs. cubic foot (80 - 112 Kg/M³	Regular Duty Wiping
	RX5*	Wire	5-7 lbs. cubic foot (80 - 112 Kg/M³	Regular Duty Scraping
	RX6*	Carbide (Grain)	5-7 lbs. cubic foot (80 - 112 Kg/M³	Regular Duty Scraping
	G1	Swab	1-2 lbs. cubic foot (16 - 32 Kg/M³	Light Duty Drying
	G2*	Coated Swab	1-2 lbs. cubic foot (16 - 32 Kg/M³	Light Duty Wiping
	G6*	Carbide (Grain)	1-2 lbs. cubic foot (16 - 32 Kg/M³	Light Duty Scraping
APPEARANCE	**SPECIAL APPLICATION SERIES**			
	PB	Power Brush ™	8-10 lbs. cubic foot (128 - 160 Kg/M³	Maximum Scraping
	CPB	Plastic Brush	8-10 lbs. cubic foot (128 - 160 Kg/M³	Light Wiping
	RXSS	Single Spiral	5-7 lbs. cubic foot (80 - 112 Kg/M³	Economical Wiping

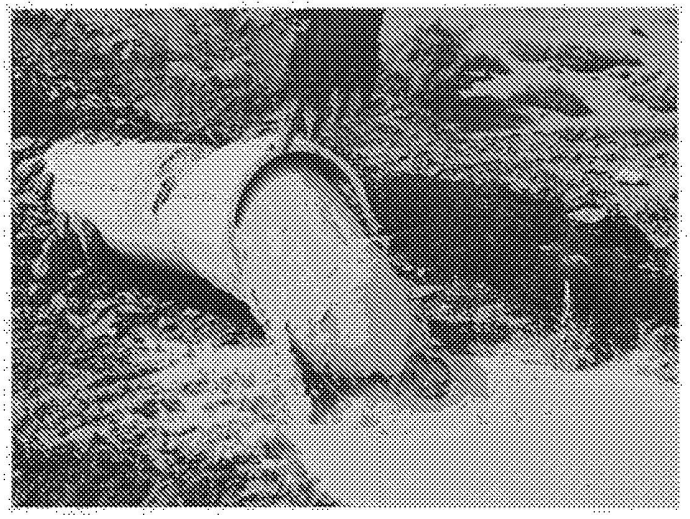
***Available with Rotating Pattern** (see back page)

	Rotating Pattern	— Promotes longer even wear in most applications Available on all coated and wire styles
	Rope Loop(s) Cable Loop(s)	— For handling; pulling Available on all styles
	Double Dish	— Liquid removal; bi-directional runs Available on all styles
	Double Nose	— Bi-directional runs with pipe reductions Available on all styles
	Cavity	— For housing electronic tracking transmitter Available on all styles
	Stud Pig	— Extra hard scale removal



1. Poly Pig exits potable water piping system after traveling 1,300'.

2. A 12" Poly Pig exits piping system after traveling several miles.



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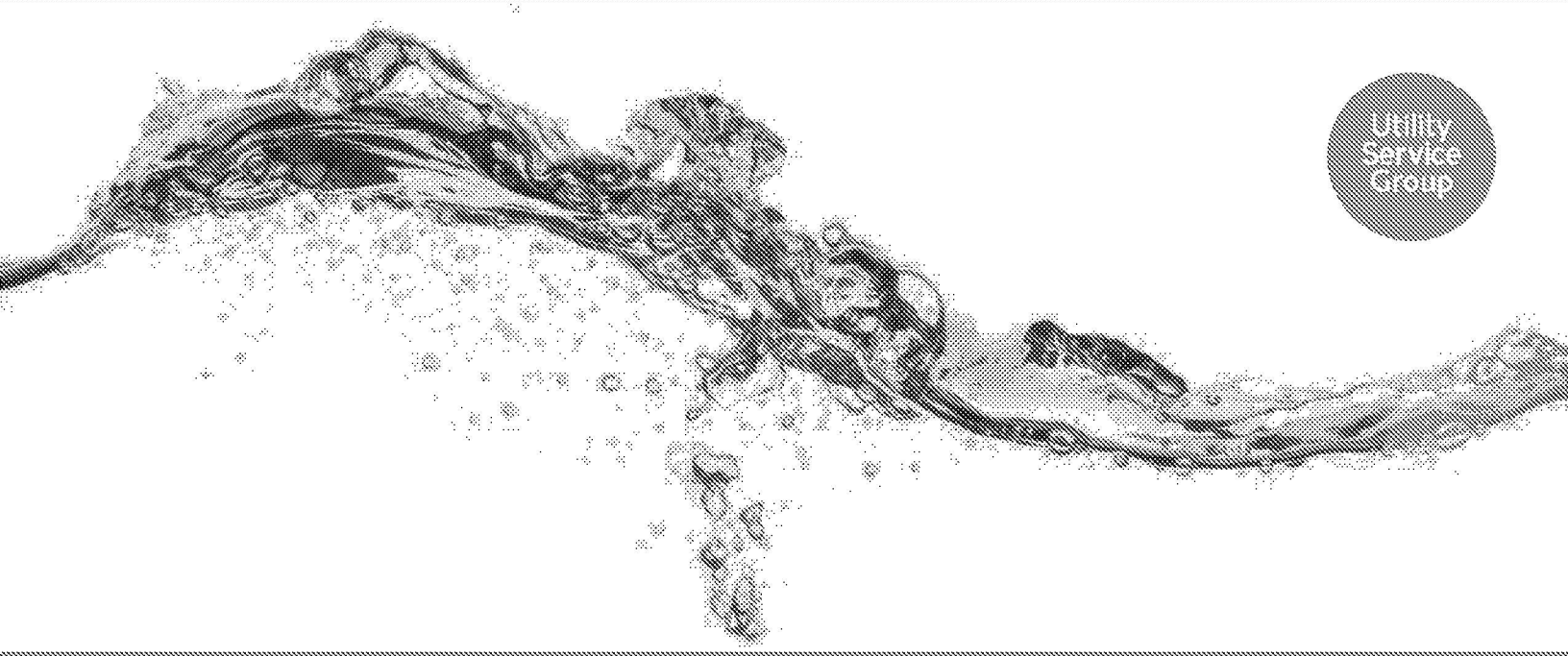
(281) 351-6688
Telefax: (281) 255-2385
www.pipepigs.com

Our Area Representative Is:

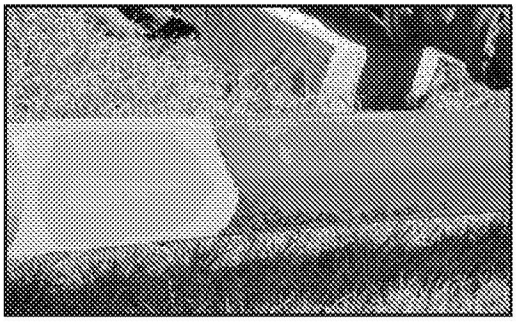
Water Quality Services

USG Advanced Pipe Cleaning (Ice Pigging)



PIGGING

ICE PIGGING for water & wastewater main cleaning!

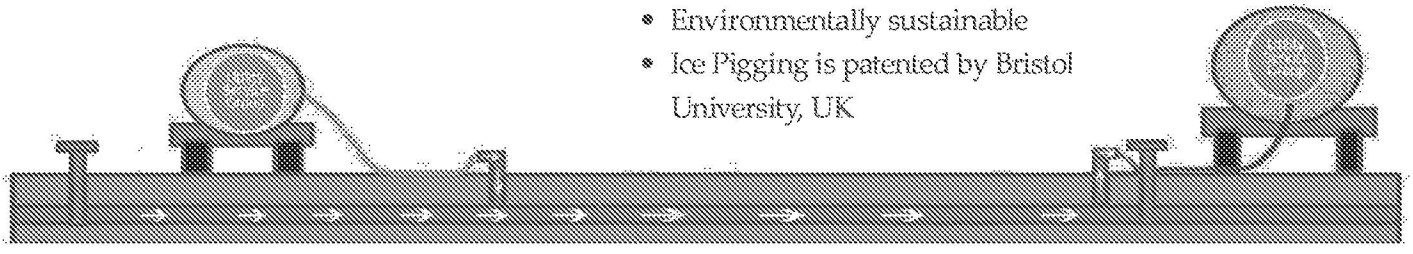


Sustainable, Simple, Innovative and Effective

ICE PIGGING combines the operational advantages of flushing with the cleaning impact of soft pigging. The Ice Pig is a semi-solid that is pumped like a liquid and flows through changes in diameter, bends and fittings without blockage. Ice Pigging has a minimum impact on operations. The ice pig is simply pumped into and recovered from a hydrant at each end of the pipe section without excavation or modification to the hydrant.

Value of Utility Service Group Ice Pigging Program:

- 1,000 times more effective removal of biofilm and sediment
- Produces quantifiable results
- Lowers disinfectant demand
- Requires no excavation
- Minimal downtime
- Requires only 1/2 the time of other techniques
- No requirement to disinfect post cleaning
- Less disruptive/expensive than solid/foam pigging
- Uses 50% less water than conventional flushing
- Environmentally sustainable
- Ice Pigging is patented by Bristol University, UK



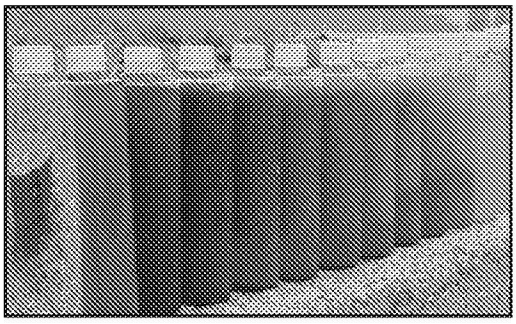
Utility Service Group

Utility Service Group has proudly served the potable and industrial water industries for over 50 years.

Today's Utility Service Group provides comprehensive condition assessments, rehabilitation services and sustainable asset management solutions throughout the whole water cycle. Our comprehensive portfolio of innovative, sustainable technologies and custom-designed professional asset management services allow a holistic approach to optimizing water production and distribution systems. USG is the exclusive license holder of ice pigging for water and wastewater applications in the US.

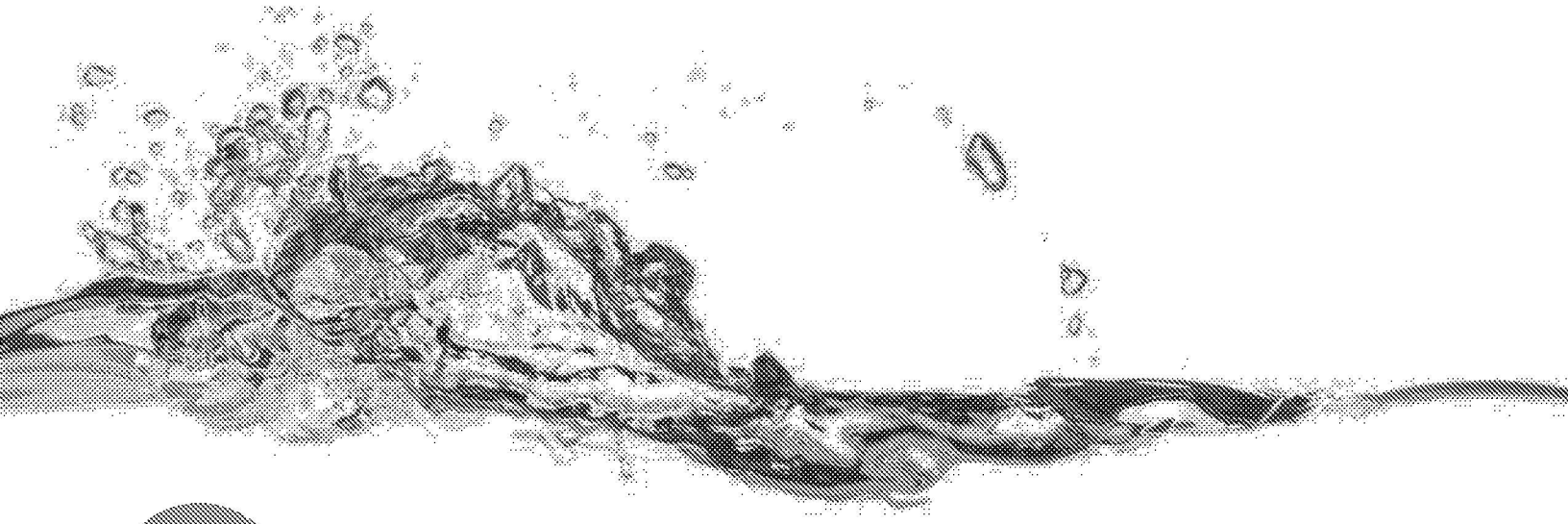
PIGGING

USG Advanced Pipe Cleaning (Ice Pigging)



Utility Service Group Ice Pigging Program includes:

- Combines operational advantages of flushing with cleaning impact of soft pigging
- Ice slurry injected and recovered through hydrants
- System pressure pumps slurry through complex pipe networks
- Pig behaves like a liquid, flows through changes in diameter, through bends and butterfly valves without blockage
- Efficient, rapid and environmentally friendly way to clean water pipes
- Suitable for pipes of all size and material for raw water, potable water and sewer force mains



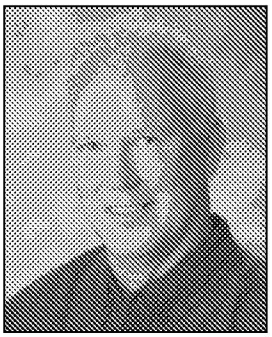
Utility Service Group

Utility Service Group
1230 Peachtree Street NE
Suite 1100 | Promenade
Atlanta, Georgia 30309
Phone 855.526.4413
utilityservice.com

by Gary Armentrout

Flushing and pigging: basic waterline maintenance

The daily operation of a public water system involves different aspects of many separate business and technical disciplines. In the course of a normal workday, operators will take a minimum of one to as many as 10 or 12 water samples. They may look for a water leak somewhere in the distribution system and will talk to three, four or more system customers about a variety of subjects. Operators may change out or add a customer water meter, repair a water leak, discuss purchases with sales reps and recheck meter readings on customer meters because "they just couldn't have used that much water." They might also have discussions with the project engineer about an upcoming project, and still make time to do some maintenance to the distribution system and equipment.



Gary Armentrout
Technical Assistant

Speaking of maintenance, there are many different types of equipment maintenance. They go by the more mundane maintenance monikers of "Before Operations Maintenance Checks," or "During Operations Maintenance Checks" and the not to be left out, "After Operations Maintenance Checks." There is also the entirely separate category of "Preventive Maintenance Checks."

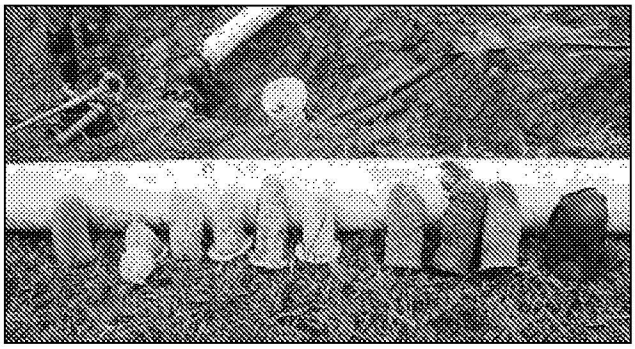
"Maintenance Shmaintenance," it all means the same thing! Maintenance has to be performed on trucks, cars, meters, pumps, hand tools, power tools. It must also be performed on computers, buildings, wells, towers, clear wells, clarifiers and just about every component in the entire system that has zero or more moving parts. Operators need to take care of system equipment if it is to provide long and reliable service.

In this article, the focus is on the part of the system that is nearly invisible and out of sight. It is the distribution system. These pipelines are buried in the cool, dark, damp underground. It is the wish and hope of everyone involved that they stay there, causing no problems – in total silence.

Unwanted buildup on the inside of most water distribution systems has been going on since the day the first valve was turned, and water started to flow through the system. How does a system avoid this buildup or deal with it?

There are many things that can be done to correct this problem.

A Fort Scott, Kan. city crew inserts a soft pig into a 4-inch ductile iron line.



Left: *The before and after look of a soft pig in the hands of Fort Scott Water Distribution Supervisor Bill Lemke.*

Above: *Pigs in a row,10 of 12 pigs used in a water line maintenance operation. The missing two pigs came out in pieces less than a quarter dollar in size.*

Some actions include changing the pH of the water, adding certain types of chemicals, and cleaning the inside of the pipe.

Flushing, as a prevention

The purpose of flushing of a water system is to remove any accumulated sediments or other impurities that have been deposited in the pipe. Flushing can also improve the flow of water, in effect, restoring the pipeline to its original capacity. Flushing is performed by isolating sections of the distribution system and then opening flush or fire hydrants to allow a large volume of water to move through the isolated pipeline and scour out any sediment.

Pigging, as a remedy

Water mains may also be mechanically cleaned with the use of swabs or pigs, as well as a variety of other means. KRWA has published numerous articles on the topic of pigging, describing the benefits of the projects from improved water quality to greater energy efficiency,

Pigs are devices that are forced through a section of line to scrape the accumulated deposits off the inside of the pipe. Pigging is now routinely conducted at the time of installing new waterlines. While some might contend that a requirement to pig a pipeline adds to the cost, I respectfully suggest that if project circumstance were to prohibit a contractor from pigging, the cost should increase. It's been proven that pigging newly installed pipelines reduces water loss due

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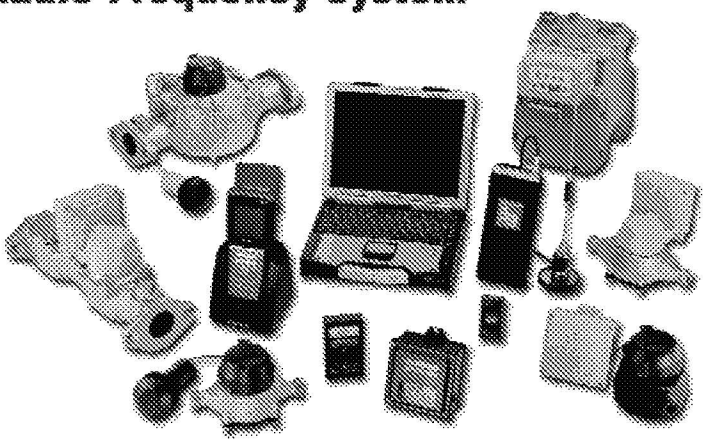

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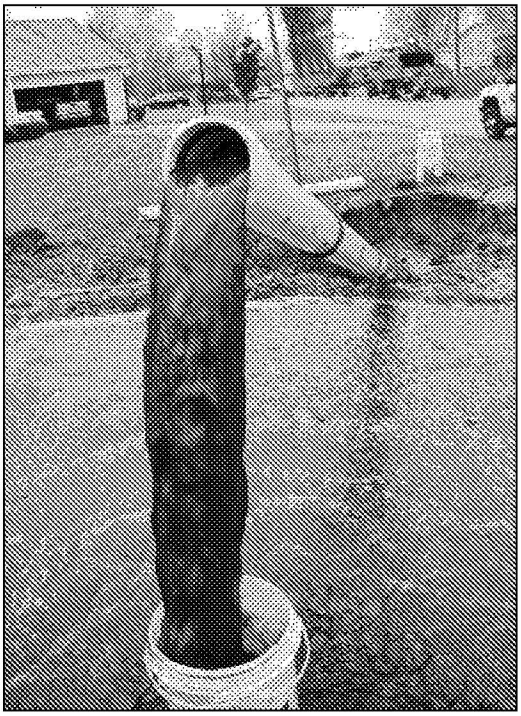
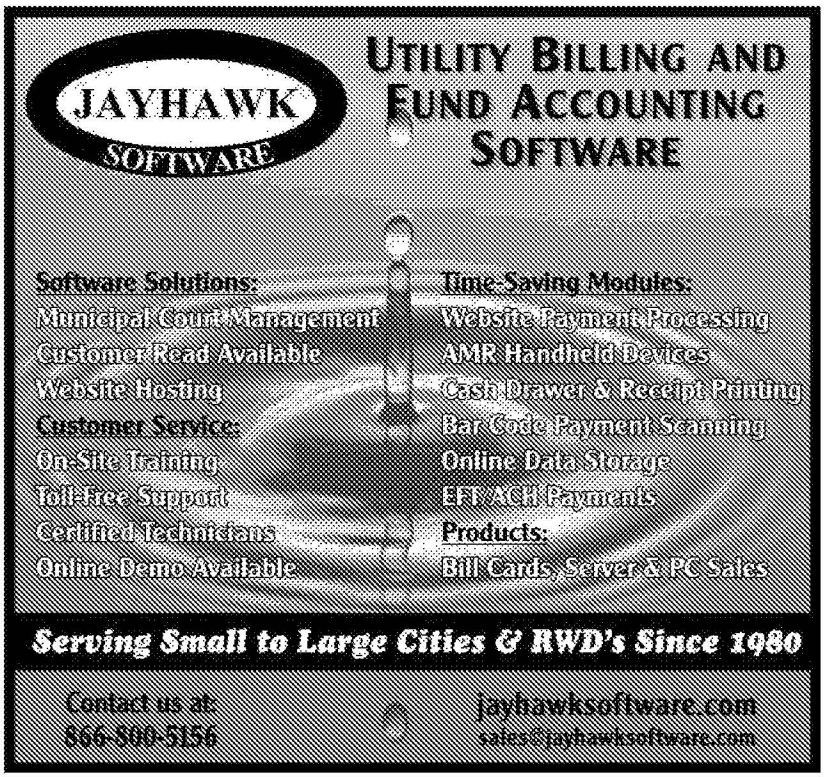


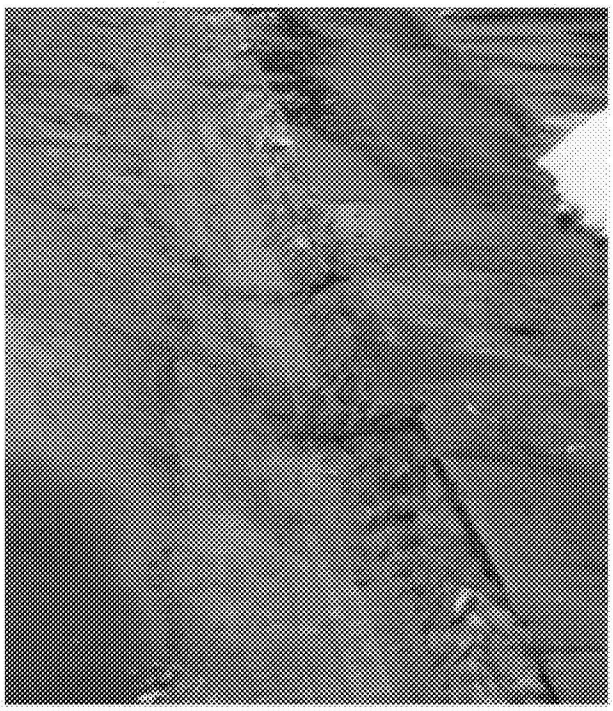
The concentration of buildup is evident coming from the inside of a ductile iron main. After years of operation and depending on water quality, excessive mineral deposits often build up inside waterlines. Pigging can often remove the deposits, improving water quality and flow characteristics.

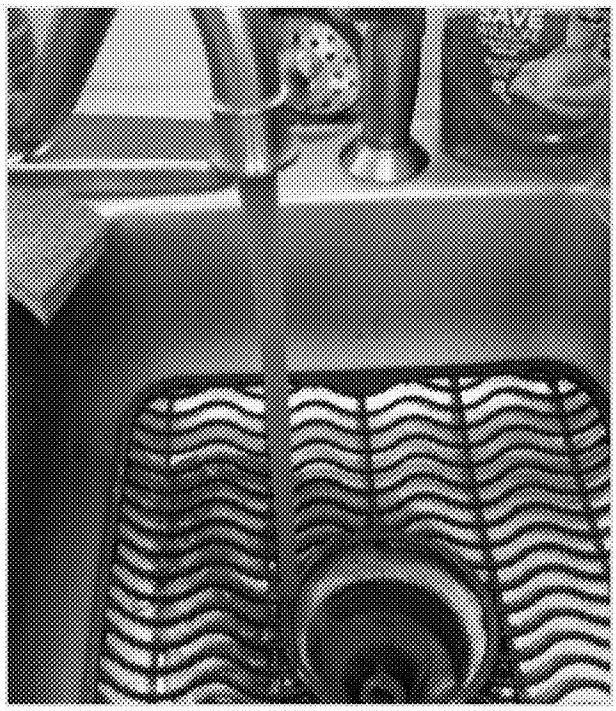
to flushing by 75%, to say nothing for the reduction of labor to complete the process of getting a new extension or pipeline into service.

When there is a buildup inside water lines that cannot be removed by simple flushing, pigging is a cost efficient, effective and environmentally friendly alternate. Most important, it is an economical alternate to line replacement. No matter what type of pipe is in the distribution system, there is a pig to do the job as needed. There are four basic types of pigs used today. Each pig is designed for a specific job. They are the polyurethane foam pigs, mandrel or mechanical pigs, solid cast urethane pigs and the high tech "smart pigs." If a system's water lines are cast iron or ductile iron, there is a very good chance of needing to pig at least some sections. The deposits in the pipelines can cause enough restriction that flow will be reduced. PVC lines normally are not subjected to the same degree of buildup as cast iron or ductile iron pipelines. PVC however will often have sediment at the bottom of the pipeline along with a thin coating covering the entire inside. A foam pig can normally remove this type of buildup. This type of pig can also be reused after traversing segments of PVC pipe. If, on the other hand the pig is used in a cast or ductile iron pipe, it is usually torn to shreds as it moves through the line. It is KRWA's experience that pigging small diameter iron pipelines may not be practical if there is a high degree of buildup. It may be impossible to remove hardened deposits from small diameter lines of one to four inches. KRWA techs have experienced pigging projects where a city system had some 4-inch pipeline with so much buildup that no daylight could be seen through even a 20-foot section.

Pipe maintenance is a very important part of the overall maintenance program of any water system. I suggest that systems practice flushing as a preventive measure and pigging as a remedy. If assistance is needed in setting up a maintenance program for a city or RWD, or there is a need to discuss flushing or pigging, contact KRWA at 785/336-3760 or e-mail KRWA at krwa@krwa.net.







From: Thelen, Mary Beth (DEQ)
Sent: Tuesday, March 17, 2015 9:55 AM
To: Hollins, Harvey (GOV)
Cc: Wyant, Dan (DEQ); Wurfel, Brad (DEQ); Thelen, Mary Beth (DEQ); Clayton, Stacie (GOV); Sygo, Jim (DEQ)
Subject: City of Flint Information - Consultants

Importance: High

Good Morning Harvey,

The consultants listed below are working with Flint and are in the best position to recommend a water filter system. The locals should be asked to use their consultants to recommend a technology.

Warren Green with Lockwood, Andrews & Newman, Inc.
[redacted]

and

Marvin Gnagy with Veolia North America
[redacted]

Thank you.

Dan Wyant
Director

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: [redacted] or [redacted] (new numbers)
Fax: [redacted]
Thelenm2@michigan.gov

From: Thelen, Mary Beth (DEQ)
Sent: Tuesday, March 17, 2015 11:39 AM
To: Hollins, Harvey (GOV); Clayton, Stacie (GOV)
Cc: Wyant, Dan (DEQ); Wurfel, Brad (DEQ); Sygo, Jim (DEQ); Thelen, Mary Beth (DEQ)
Subject: SDWA Violations - Flint

Importance: High

Dear Harvey,

Director Dan Wyant asked that I send you the following information regarding Flint.

As requested, the following information has been gleaned from our database regarding violations:

In calendar years 2013 and 2014, we've identified 1100 violations (200 are standards violations, i.e., MCLs; and 910 other violations).

This represents 326 community water supplies that had violations over these two years.

Flint has 5 violations in those 2 years (TTHM MCLs at 2 sites and 2 bacti MCLs (1 with E. coli that counts as an additional violation)).

Please let us know if you need anything further. Thank you.

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Hollins, Harvey (GOV)
Sent: Monday, February 09, 2015 1:57 PM
To: 'Kelly Rossman-McKinney'; Murray, David (GOV)
Cc: Clayton, Stacie (GOV)
Subject: RE: Flint Water

Kelly,
I am deferring this to our communications team. Let me know if you connect with them.

Best,
Harvey

From: Kelly Rossman-McKinney [mailto:krossman@truscottrossman.com]
Sent: Friday, February 06, 2015 3:22 PM
To: Murray, David (GOV); Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Flint Water

Dave & Harvey: We are working with Veolia North America, the water consulting team Flint has hired to "assess the situation." We're planning to hold a media roundtable with city officials on Tuesday to introduce the Veolia team to local reporters. Gerry Ambrose suggested we invite some of the folks you invited to attend the newser earlier this week. Is that a list you can share with me or would it be better for the invite to come from you or the EM directly? I don't have a specific time yet but can provide that information for you when it is available. What do you think?

Kelly

PS I forgot to say thanks!!!!

Kelly Rossman-McKinney
CEO
Truscott Rossman • truscottrossman.com
Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing, MI 48933
200 Renaissance Center, Ste. 3160 • Detroit, MI 48243
125 Ottawa Ave. N.W., Ste 235 • Grand Rapids, MI 49503

Cell: [redacted]
Office: (517) 487-9320
Fax: (517) 487-5060

Appointment

From: Muchmore, Dennis (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MUCHMORED]

Sent: 9/24/2015 5:41:14 PM

To: Muchmore, Dennis (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Muchmored]; Hollins, Harvey (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Hollinsh]; Clement, Elizabeth (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Clemente]; Clayton, Stacie (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Claytons3]; Baird, Richard (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Bairdr]; VanSickle, Michele (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Vansicklem2]; Murray, David (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MurrayD1]; Wyant, Dan (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=57e17534bc6d44b990e757afc8d8799d]; Thelen, Mary Beth (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=c4520ecc4a714eac8d2eae5a6c21ab7c]; Wurfel, Brad (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=b6f17684155b465697bd2b350f2eb914]; Lyon, Nick (DCH) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=82b6b2e19e0e49058d52197dd3ba59c2]; Lasher, Geralyn (DCH) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=d7135a709f634c62b53c9dc1c48eb5ff]; Grijalva, Nancy (DCH) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=26159b09b39044a8a8c94fdfd48e597d]; Saxton, Thomas (Treasury) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=5510c3cdf27f42dfb68ebdd7c7471e5b]; Pleyte, Beth (Treasury) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=ba7e977f7a4c49b0b1fc0b6cd7339a8c]; Walsh, John (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Walsh John91e]; Hall, Jean (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Hallj16]; Mcbride, Bill (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Mcbrideb]

Subject: Conf Call re Flint Water

Location: [redacted]

Start: 9/24/2015 7:30:00 PM

End: 9/24/2015 8:00:00 PM

Show Time As: Busy

Required Attendees: Harvey Hollins (hollinsh@michigan.gov); Clement, Elizabeth (GOV) (clemente@michigan.gov); Clayton, Stacie (GOV); Baird, Richard (GOV); VanSickle, Michele (GOV) (vansicklem2@michigan.gov); Murray, David (GOV); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Wurfel, Brad (DEQ); Lyon, Nick (DCH); Lasher, Geralyn (DCH); Grijalva, Nancy (DCH); Saxton, Thomas (Treasury) (SaxtonT@michigan.gov); Pleyte, Beth (Treasury); Walsh, John (GOV) (WalshJ@michigan.gov); Hall, Jean (GOV); Mcbride, Bill (GOV)

[redacted]

[redacted] – Harvey to host

Appointment

From: GovCalendar [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=GOVCALENDAR]

Sent: 9/29/2015 2:50:47 PM

To: GovCalendar [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=GovCalendar]; Mcbride, Bill (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Mcbrideb]; Wisniewski, Wendy (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Siegelw]; Muchmore, Dennis (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Muchmored]; Lyon, Nick (DCH) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=82b6b2e19e0e49058d52197dd3ba59c2]; Grijalva, Nancy (DCH) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=26159b09b39044a8a8c94fdfd48e597d]; Wyant, Dan (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=57e17534bc6d44b990e757afc8d8799d]; Thelen, Mary Beth (DEQ) [/O=MIGOV/OU=EXTernal (FYDIBOHF25SPDLT)/cn=Recipients/cn=c4520ecc4a714eac8d2eae5a6c21ab7c]; Etue, Kriste (MSP) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=EtueK]; Klotz, Josephine (MSP) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=KlotzJ]; Hollins, Harvey (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Hollinsh]; Clayton, Stacie (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Claytons3]; Hansen, Rachel (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Hansenr3]; Murray, David (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MurrayD1]; Adamczyk, Lynne (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Adamczkyl]; Sands, Thomas (MSP) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=SandsT]

CC: Clement, Elizabeth (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Clemente]; Agen, Jarrod (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Agen Jarrod9ea]

Subject: RDS/DM/BM/NL/DW/Maggie Pallone/Karen Tommasulo/Col. Etue & Lt. Col. Sands/HH/DMurray/TSaxton - Meeting Re: Flint Water

Location: Governor's Conference Room, Romney

Start: 9/29/2015 5:00:00 PM

End: 9/29/2015 5:30:00 PM

Show Time As: Busy

Required Attendees: Mcbride, Bill (GOV); Wisniewski, Wendy (GOV); Muchmore, Dennis (GOV); Lyon, Nick (DCH); Grijalva, Nancy (DCH); Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Etue, Kriste (MSP); Klotz, Josephine (MSP); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Hansen, Rachel (GOV); Murray, David (GOV); Adamczyk, Lynne (GOV); Sands, Thomas (MSP)

[redacted]

HH by Phone

[redacted]

Host: [redacted] – RH to dial in as host

Message

From: Wurfel, Brad (DEQ) [/O=MIGOV/OU=EXTERNAL (FYDIBOHF25SPDLT)/CN=RECIPIENTS/CN=B6F17684155B465697BD2B350F2EB914]
Sent: 3/5/2015 5:18:05 PM
To: Hollins, Harvey (GOV) [/O=MIGOV/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Hollinsh]
Subject: RE: Items
Flag: Follow up

Into it now. I'll have you something to review today.

Understand we don't specialize in home level filtration systems. We work at the system-level, so I had to cast about for a bit to get our folks into this idea.

Also understand we don't go to the homes of individuals when they have drinking water issues. The city owns this system, they maintain it, and they respond to customers.

From: Hollins, Harvey (GOV)
Sent: Thursday, March 05, 2015 9:44 AM
To: Wurfel, Brad (DEQ)
Cc: Wyant, Dan (DEQ)
Subject: Items

Brad,

Per Monday's conference call, when can we expect to receive DEQ's review of the home filter units. Also, of the total notices/citations issued by DEQ to communities regarding drinking water around the state, what percent was issued to Flint in 2013 and 2104.

Best,

Harvey Hollins, Director

Office of Urban Initiatives

State of Michigan

Governor Rick Snyder

Executive Office

☎:: (313) 456-4994 (Office) | [redacted] (Cell)
:: 3044 W. Grand Blvd | Suite 14-650 | Detroit, MI 48202

From: Hollins, Harvey (GOV)
Sent: Monday, December 28, 2015 3:52 PM
To: Baird, Richard (GOV); Wyant, Dan (DEQ); Lyon, Nick (DHHS); Holland, Meegan (GOV); Agen, Jarrod (GOV)
Cc: Krisztian, George (DEQ); Brownfield, Michael (GOV); Thelen, Mary Beth (DEQ); Khouri, Nick (TREASURY); Kriste Kibbey Etue (EtueK@michigan.gov); Whiston, Brian (MDE)
Subject: RE: Comments on SoS
Attachments: 20151228_SoS Draft DEQ.docx

Dan,
Thanks for putting this draft together. I agree with Rich's edits, and the attached document has my recommendations. Also, I suggest we add the following departments to comment on this document as the issue in Flint now goes beyond water quality: Treasury, MSP and Dept. of Education. I've taken the liberty to solicit comments from the added directors through this reply.

Best,
Harvey

-----Original Message-----
From: Baird, Richard (GOV)
Sent: Monday, December 28, 2015 12:36 PM
To: Wyant, Dan (DEQ) <WyantD@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Holland, Meegan (GOV) <HollandM2@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Cc: Krisztian, George (DEQ) <krisztiang@michigan.gov>; Brownfield, Michael (GOV) <BrownfieldM2@michigan.gov>; Thelen, Mary Beth (DEQ) <THELENM2@michigan.gov>
Subject: Comments on SoS

Dan:

I added Jarrod and Meegan since we were engaged with Harvey and with Governor Thursday morning last week. I may be advocating a higher degree of "aggression" than others deem proper and I will defer to Jarrod after having had my say.

My key points on the attached (with suggested language and which have been highlighted) are:

1). Apologize. It happened on our watch and it shouldn't have happened, no matter what the law says.

2). Invite those who were the biggest burrs under the saddle to come work with us. In fact, we should be articulating how they have already been invited to our labs to collaborate on the findings and conclusions.

3). Start framing the infrastructure problem. We have huge problems throughout the state with aged piping and plumbing. Ignoring it will be at the peril of future generations. We should put a number out there on what it is going to take to fix it or conclude it is safe for generations to come.

Thanks for taking the lead.

Regards,

Rich

I have put Comments/Questions/Suggestions in [ ]...

Draft –Not for Distribution 12/28/15

TAKING ACTION ON FLINT WATER

[I would start off with an apology..."Among the things our citizens have a right to expect from their government is clean, safe water. In Flint's case, government failed them on many levels. As the Chief Executive of the state, I apologize for these failures and am absolutely committed to making things right. I would ask that all of our leaders at the local, state and federal level, work with me to solve the immediate problems and put in place long term measures to monitor and address the consequences from exposure. I also want to thank Dr. Mona Attisha Hannah and Dr. Marc Edwards for their diligence in making sure I understood the severity of the problem before us.]

• Every municipality in Michigan deserves safe drinking water.

•

• As Governor, I am committed to addressing the issue.

• Lead exposure is a serious issue.

• I appreciate those who have brought attention to this issue.

• We are committed to safe drinking water and to working in partnership with the city of Flint, Genesee County, and the U.S. EPA.

• We must learn from what happened in Flint.

• In October, I announced a ten point action plan to address lead exposure in Flint.

• Today, I am outlining additional actions to make sure the public health is protected in Flint and elsewhere in the State of Michigan.

• I am asking for changes in order to see that the Michigan Drinking Water Program becomes a national leader in public health protection.

On October 2, 2015 the Flint Water Action Plan was announced. With the help of the Michigan Legislature and the Mott Foundation, we have taken significant action to address the issue. Actions include:

• Switching back to the Great Lakes Water Authority/DWSD water supply (October 16, 2015)

Deleted: Flint

Deleted: .

Comment [HH1]: The issue in Flint is the failure of Government to ensure safe drinking water. The aging infrastructure exacerbated that failure, and serves as the canary in the coal mine re the need for the legislature to address water and sewage infrastructure statewide.

Deleted: The issues around Flint's drinking water represent the challenges of aging infrastructure

Deleted: .

Comment [HH2]: It is important to note that this switch is temporary until KWA is online.

• Provided water filters to residents of Flint. (DHHS to provide update) [Distribution has been a problem--are we addressing it?]

• Testing all Flint schools, preschools and day cares. Summary of results to date.(George to provide)

• Expanded health exposure testing of individual residences. Summary of results to date. (Nick to provide)

• Offer water testing at no cost to Flint residents to assure safe water. Summary of results to date. (George to provide)

• Expedite optimizing corrosion control in the Flint drinking water system. Summary of date completed. (George to summarize)

• Utilize the "Safe Drinking Water Technical Advisory Committee." To ensure the best technology, practices and science are being utilized; national experts have been assembled to provide technical advice. [Will you include Dr. Mona? Larry Reynolds? Mark Edwards?]

• Accelerate water system improvement to address replacement of lead service lines. We are working with the city of Flint and our Congressional delegation on a lead service line replacement plan.

• Working to expedite the completion of the Karegnondi Water Authority. And to provide the expertise to upgrade the water treatment facility in Flint to ensure that the drinking water from KWA is at least the same quality as the water from GLWA/DWSD

• Expand a lead education program.
(DHHS to provide update)

• Dr. Eden Wells was named as the Flint Drinking Water Public Health Advisor to ensure safe drinking water.

[Flint's Head of Mott Children's Hospital, Dr. Larry Reynolds was named to the Flint After Action Task Force].

In addition to the announced Flint Action plan, I am calling for additional actions to be taken.

• Recently appointed Harvey Hollins to serve as my administration's point person to coordinate ongoing activities and partner with the city of Flint. [Harvey will be supported by senior members of my executive team to remove impediments and ensure efficient coordination at all levels.]

• Asking the DEQ to develop a statewide drinking water school testing program.

• Asking for changes in the Michigan Drinking Water Program in order for it to be recognized as a national leader in public health including:
o New administrative leadership.
o Creation of corrosion control expertise.
o Expanded statewide testing.
o Improved testing protocols.

• The creation of a health fund for children affected by lead exposure.

• Calling on the Legislature to work with my administration and stakeholders to develop a Strategic Water Fund to address Michigan's long term safe water and water quality infrastructure needs. [This can't get lost. Need more to educate people that our infrastructure is old, that the average city of 50,000 or more likely requires $$$ in remediation. At some point the anti corrosive treatment is not likely to be sufficient.]

• I will look to implement additional recommendations of the Flint Water Advisory Task Force, and I appreciate their leadership on this issue. [I would say more here—the TF was bi-partisan, independent, and staffed by incredible talent. It has done an incredible job].

• Ensure transparency for the public regarding actions taken in Flint to resolve this crisis

Sent from my iPad

On Dec 28, 2015, at 10:14 AM, Wyant, Dan (DEQ) <WyantD@michigan.gov> wrote:

Please edit, correct, and expand summaries as indicated in the attached document called Taking Action on Flint Water Draft 12-28-15. This document is intended to serve as a basis for the Governor to address the Flint drinking water issue in the State of the State and budget announcement.

I have also attached a pdf of a document called Drinking Water Program Budget Request for your information.

Please send your response back to me and also copy all by Monday, January 4, 2016, Close of Business.

Thank you.

Dan Wyant
Director
517-284-6700
<TAKING ACTION ON FLINT WATER DRAFT 12-28-15.docx>

<Drinking Water Program Budget Request.pdf>

Governor Rick Snyder
November 10, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of November 2-6

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Conduct After Action Plan	DEQ	George Krisztian	Meeting held on 10/29/15 to discuss time line
2.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
3.	Assist After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
4.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	Negotiations underway to contract with the Genesee County Health Department
5.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	
6.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A summary report for Freeman Elementary School has been drafted
7.	Contact DHHS regarding lead education material for schools; provide information as requested by DHHS	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Meeting held on 10/27/15; action items created
8.	Follow up with city of Flint regarding corrosion control treatment and their plans to address requirements and options provided for in 10/30/15 DEQ letter	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
9.	E-mail city of Flint regarding timing to install corrosion control now that the construction permit has been issued	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	E-mailed city of Flint on 11/4/15; 11/5/15 response indicated equipment to be ordered and plan to start installing feed piping on 11/9/15
10.	Review Monthly Operation Reports (MORs) for Standby Operation of Flint Water Treatment Plant with city of Flint; draft letter to city of Flint documenting Standby Operation requirements	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Letter is drafted and will be sent to city of Flint the week of 11/9/15; MOR review with city of Flint will be conducted during next routine site visit
11.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues; check weekly for status update	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Issues regarding soil erosion controls during construction are being addressed
12.	Continue evaluating city of Flint Service Line Record status and comparison to sampling pool	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Letter requesting additional information/documentation to be provided to city of Flint on 11/9/15
13.	Provide DHHS with any available cross-reference information regarding lead service lines and plumbing materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
14.	Develop childcare facility guidance or review DHHS-related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Meeting held on 10/27/15; DHHS to provide materials
15.	Develop draft sampling protocol for residential exposure assessment for DHHS	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook	Draft document under development; discussed preliminary plan with DHHS

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
			Mike Prysby	
16.	Make progress on drafting a generic school sampling guidance document for statewide distribution; target audience: schools served by municipal water	DEQ and LARA	Jim Sygo Steve Busch Richard Benzie	Draft document under development to make it an easy-to-read and follow guidance document
17.	Attend 11/5/15 meeting arranged by DHHS regarding residential elevated blood lead investigations and water testing	DEQ and DHHS	Jim Sygo George Krisztian Steve Busch	Done

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Key Actions:

- The city of Flint has received the necessary building permits to move forward with plans for the supplemental addition of phosphate to water that is coming from the Detroit Water and Sewerage Department. The purpose of the supplemental addition of phosphate is to reestablish the protective coating throughout the distribution system. This protective coating slows the leaching process of lead from service lines, household fixtures, and solder used for connecting copper pipes. The city of Flint has made the purchase of the necessary equipment a high priority and hopes to have the pumps installed and running within the next month.

- The report for Freeman Elementary School that documents and explains the results of the plumbing evaluation conducted by the DEQ and DLARA has been completed and will be distributed on November 9. The report demonstrates that the issues in the school are fixture-specific and that there was no evidence found to suggest that significant lead contamination is occurring deep within the plumbing system. The report will recommend replacement of fixtures that were found to have lead levels exceeding 15 parts per billion. Once a press release has been issued, the report will be posted to the Flint water Web site: www.mi.gov/flintwater.

- Data for residents of the city of Flint have been compiled into spreadsheets that sort the data by ZIP Code and also by concentration. The data to date indicate that the issue of lead contamination is not system-wide but is site specific. Over three quarters of the samples showed lead levels of 5 parts per billion or less and over 91 percent of the samples were at levels of 15 parts per billion or less. These spreadsheets will also be posted to the Flint water Web site.

Positions:

- With respect to the school data and the samples submitted by residents through the free lead testing program, the issue of lead contamination in the water appears to be site specific. In both cases, the water within the distribution system does not appear to be the issue. The contamination appears to be coming from fixtures, solder used to connect copper, and from lead service lines. While the initial results are encouraging and show that the large majority of homes do not have an issue, it is important that residents do not make assumptions. The only way to know if water contains lead is to have it tested.

Concerns:

- The action level of 15 parts per billion that is used in the lead and copper rule (LCR) was set up to determine if a supply was utilizing optimized corrosion controls. It was not meant to serve as a health-based exposure model. The

DEQ will be releasing data on Freeman Elementary School and residential data on November 9. The DHHS is currently working on evaluating blood lead levels on children in the city of Flint. It is important that when the DHHS is ready to present their data that the message they present does not inadvertently contradict information provided by the DEQ. While it is recognized that the ultimate goal is to have no detectable amount of lead in the water, this goal may not be practical as the DEQ utilizes the criteria as specified by the U.S. Environmental Protection Agency (EPA).

- The State of Michigan is being criticized as a result of recent information coming to light that a significant number of samples were not collected from proper sampling locations as part of the sampling program in the city of Flint to demonstrate compliance with the LCR under Michigan's Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). Recently the city of Flint began to electronically convert customer service line information. This effort, along with statements by some of the city of Flint's certified operators, directly conflicts with information certified by the city of Flint in documents referred to as LCR compliance monitoring certification reports.

- Correspondence is drafted and will be sent to the city of Flint requesting that they provide appropriate documentation to demonstrate that the sampling locations selected and certified by the city of Flint comply with Act 399. In the absence of appropriate justification/documentation, the city of Flint may be subject to enforcement for violation of Act 399.

Significant Event:

- On November 3 the EPA issued a memorandum to address "certain concerns raised about the application of the [federal] 1991 Lead and Copper Rule, specifically the requirements pertaining to maintenance of optimal corrosion control treatment, in situations in which a large water system ceases to purchase treated water and switches to a new drinking water source." This EPA memorandum further states: "This type of situation rarely arises and the language of the LCR does not specifically discuss such circumstances. After reviewing the rule with our Office of General Counsel, it appears that there are differing possible interpretations of the LCR with respect to how the rule's optimal corrosion control treatment procedures apply to this situation…." This EPA memorandum clarifies the requirements should a situation like Flint occur again in the future. However, it clearly recognizes that the options chosen by Michigan were one interpretation or option of the LCR.

Changes from Previous Report:

- Staff e-mailed Michael Glasgow and Brent Wright of the city of Flint on November 4 to request a time line and a request to notify the DEQ when the phosphate equipment is installed. Mr. Wright responded on November 5 noting

that the city of Flint just received the Act 399 permit in the mail on November 5. Equipment is to be ordered by November 6, and the Flint Water Treatment Plant operators plan to start installing the feed piping on November 9.

- A letter detailing standby operation requirements is currently being prepared by the DEQ and will be sent to the city of Flint during the week of November 9. A review of the standby operation monthly operation reports with the city of Flint will be conducted during the next routine site visit at the Flint Water Treatment Plant.

- A letter has been prepared that requests the city of Flint to provide additional information and documentation regarding all of their historic LCR compliance sampling sites and to compare the service line information reported on the LCR compliance monitoring certification reports against the service line information from the city of Flint's digitized index cards. Conflicts noted between the index cards and the LCR compliance monitoring certification will need further explanation, and the city of Flint will need to provide supporting documentation demonstrating these sites meet Tier 1 criteria. The letter will be provided to the city of Flint on November 9.

- The draft document for sampling protocol for residential exposure assessment is under development. DEQ staff discussed the preliminary plan with DHHS staff.

- The draft document for generic school sampling guidance for statewide distribution is under development. Staff is working on making this an easy-to-read and follow guidance document.

- DEQ staff met with DHHS staff on November 5 to discuss residential elevated blood lead investigations and a protocol for water testing.

Other Items:

- As provided by the DHHS, the purchased total water filter/pitcher distribution through November 6 is 13,649 units.

- Attached are the:
  - Final report for the plumbing evaluation of Freeman Elementary School
  - Spreadsheets that consolidate the lead and copper data for Freeman Elementary School
  - Consolidated spreadsheets for water samples submitted by Flint residents sorted by ZIP Code and sorted by concentration

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
November 9, 2015

FREEMAN ELEMENTARY SCHOOL

Outlet Sampling and Plumbing Assessment Recommendations

4001 Ogema Avenue, Flint, MI 48507

BACKGROUND INFORMATION

On Friday, October 23, 2015, the Department of Licensing and Regulatory Affairs (DLARA) and the Department of Environmental Quality (DEQ) conducted an assessment of Freeman Elementary School's plumbing system to gain a comprehensive understanding of how water moves through the building and what types of plumbing materials are used. The assessment identified the following potential sources of lead leaching into drinking water:

- Lead solder joints on copper piping
- Brass valves and brass fittings
- Brass components in fixtures
- Galvanized piping

The assessment also identified 31 faucets or fountains that provide water for drinking, cooking, and/or food preparation. The team developed a sequence for sampling the 31 faucets/fountains based on how the water travels through the building.

On Saturday, October 24, 2015, the DEQ and the DLARA completed sampling of the 31 faucets/fountains, in the order determined by the plumbing assessment from the previous day, following a stagnation period of 12 hours. At each of the 31 faucets/fountains identified, staff collected four samples. Two initial, 125-milliliter samples (P1 and P2) were collected immediately after turning on the tap. The water was then flushed for 30 seconds, and a third 125-milliliter sample (F1) was collected. Finally, the water was flushed for another two minutes, and the fourth 125-milliliter sample (F2) was collected. These samples were used to determine the impact of any lead sources in and around each specific faucet/fountain and its connecting plumbing.

On Saturday, October 31, 2015, the DEQ completed consecutive sampling at three of the 31 faucets/fountains following a stagnation period of 12 hours. This sampling was used to determine the impact of any lead sources located deep in the supply plumbing. The three sites included one site near the building service line, one site near the plumbing mid-point, and one site at the far end of the plumbing system. At each of these three sites, staff collected 10, 1-liter samples. The 10 samples were collected immediately after turning on the tap, and consecutively, without any flushing time in between.

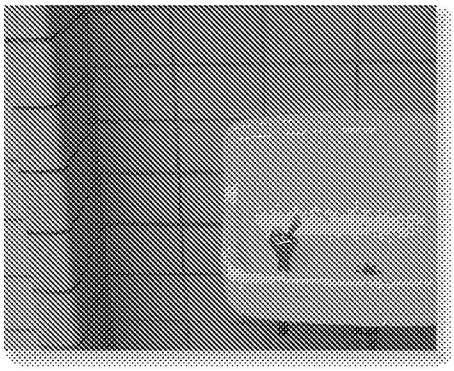
WATER SERVICE INFORMATION

A four-inch diameter cast iron water service line enters the school in the boiler room on the west wall. Piping in the boiler room immediately transitions into galvanized metal piping for cold water lines. Two separate galvanized cold water supply lines exit the boiler room. One in the northeast corner appears to serve the gym, auditorium, and proposed pre-K facilities on the north end of the school. The other exits the boiler room in the southwest corner and appears to serve the remainder of the school to the south, including the library. This line was also found to have grounding connections attached to the piping. Hot water is distributed in continuous loops that feed from and return to a central water heater in the boiler room. Hot water piping material, where exposed, was copper piping with 50/50 lead solder joints. Brass valves were seen throughout the building.

Outlets With Lead Levels Greater Than 15 Parts per Billion

The DEQ recommends school facilities take action if samples from any drinking water outlets show lead levels greater than 15 parts per billion. Based on the sampling conducted at 31 faucets/fountains on October 24, 2015, the following nine drinking water outlets had lead water level results greater than 15 parts per billion. Each of these nine outlets is listed below with its sample results, including a description of the potential source(s) of lead, and recommended actions for the school to take.

Outlet: Bubbler Drinking Fountain, Left (DW001)

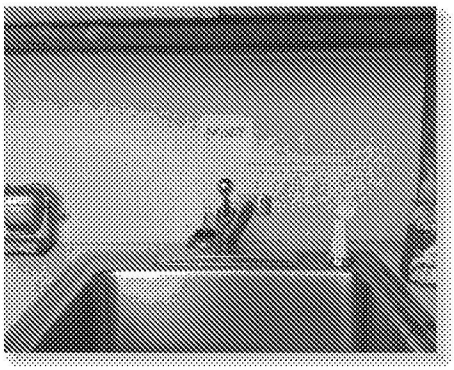


Location: Hallway outside Janitorial Room
Results: P1=40 parts per billion, P2=6 parts per billion
F1=4 parts per billion, F2=1 part per billion

These results suggest the highest contribution of lead may be from the bubbler itself. This bubbler fixture is believed to have a brass valve. The connection underneath the sink also appears to have some brass components, including the valve at the wall.

Replacement of this bubbler tap and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Sink Faucet (CF029)



Location: DHHS Office, west wall
Results: P1=17 parts per billion, P2=12 parts per billion
F1=2 parts per billion, F2=non-detect

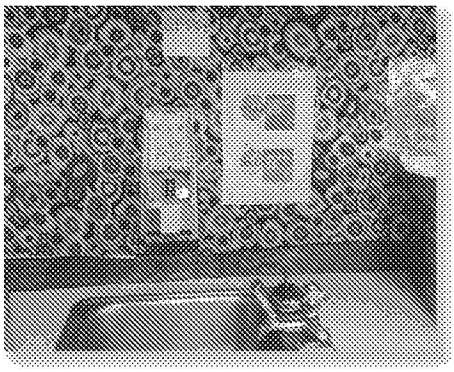
These results suggest the highest contribution of lead may be from the faucet and its connecting plumbing. The faucet is a Delta 400. This model faucet valve has brass components. This style faucet also has a mixing valve that may allow mixing of hot and cold water. Connecting plumbing in the cabinet under the sink may also contain brass components.

This faucet also has an aerator at the outlet. The aerator should be removed, inspected for particulate accumulations, scrubbed clean, and reinstalled. If particulates are found, the aerator should be periodically checked and cleaned.

Replacement of this faucet and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Integrated faucet and bubbler fountain (CF006)

Location: Classroom 2, south wall
Results: P1=16 parts per billion, P2=3 parts per billion
F1=1 part per billion, F2=1 part per billion

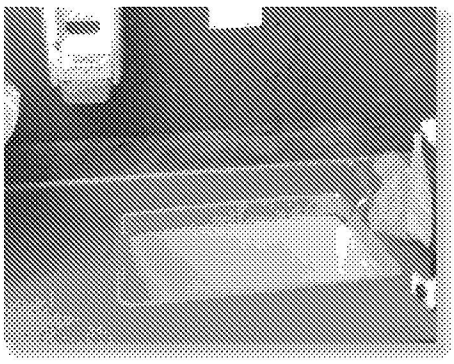


These results were collected from the faucet portion of the fixture and suggest the highest contribution of lead may be from the fixture itself. The make and model of this fixture is unknown, but appears to be made of chrome plated brass and may be connected on the underside of the sink using a brass nipple.

Replacement of this fixture and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Integrated faucet and bubbler fountain (CF014)

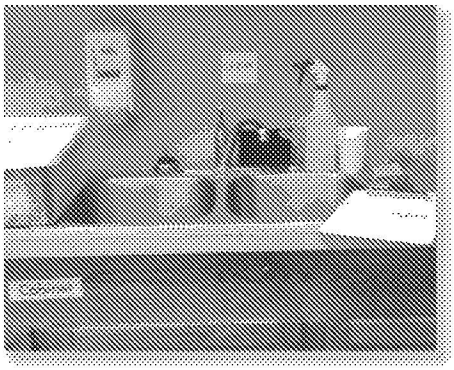
Location: Classroom 10, north wall
Results: P1=27 parts per billion, P2=7 parts per billion
F1=4 parts per billion, F2=3 parts per billion



These results were collected from the faucet portion of the fixture and suggest the highest contribution of lead may be from the fixture itself and its connecting plumbing. The make and model of this fixture is unknown, but appears to be made of chrome plated brass and may be connected on the underside of the sink using a brass nipple. Connecting plumbing in the cabinet under the sink may also contain brass components.

Replacement of this fixture and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Sink Faucet (CF013)



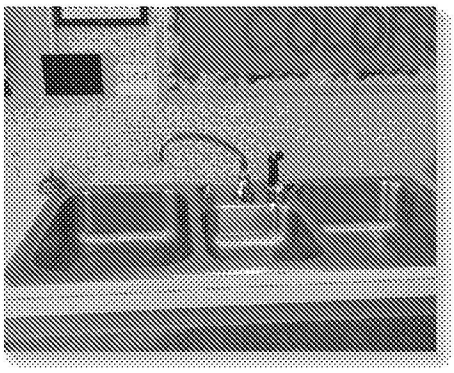
Location: Classroom 10, north wall
Results: P1=9 parts per billion, P2=18 parts per billion
F1=3 parts per billion, F2=3 parts per billion

These results suggest the highest contribution of lead may be from the connecting plumbing with some contribution from the faucet itself. The faucet appears to be a Delta 500 series. This model faucet may have some brass components. This style faucet also has a mixing valve that may allow mixing of hot and cold water. Connecting plumbing in the cabinet under the sink should be checked for brass components, including brass valves.

This faucet also has an aerator at the outlet. The aerator should be removed, inspected for particulate accumulations, scrubbed clean, and reinstalled. If particulates are found, the aerator should be periodically checked and cleaned.

Replacement of this faucet and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Sink Faucet (CF015)



Location: Classroom 11, northeast corner
Results: P1=102 parts per billion, P2=326 parts per billion
F1=14 parts per billion, F2=11 parts per billion

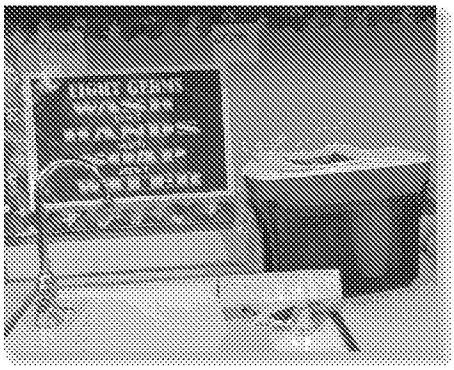
These results suggest the highest contribution of lead may be from the connecting plumbing and from the faucet itself. The faucet is an older design that uses a brass tube approximately 8 inches in length between the hot and cold water valves and connects to the outlet under the sink. This brass tube may be the primary source of lead, explaining the higher second (P2) sample result. The faucet and valves may also contain brass components. Connecting plumbing in the cabinet under the sink should be checked for additional brass components, including brass valves.

This faucet also has an aerator at the outlet. The aerator should be removed, inspected for particulate accumulations, scrubbed clean, and reinstalled. If particulates are found, the aerator should be periodically checked and cleaned.

Replacement of this faucet and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location and needs to be completed. If replacement is not currently feasible, **DO NOT USE THIS FAUCET FOR DRINKING OR COOKING.**

Outlet: Integrated faucet and bubbler fountain (CF024)

Location: Classroom 19, east wall
Results: P1=23 parts per billion, P2=3 parts per billion
F1=4 part per billion, F2=3 parts per billion



These results were collected from the faucet portion of the fixture and suggest the highest contribution of lead may be from the fixture itself. The make and model of this fixture is unknown, but appears to be made of chrome plated brass and may be connected on the underside of the sink using a brass nipple.

Replacement of this fixture and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

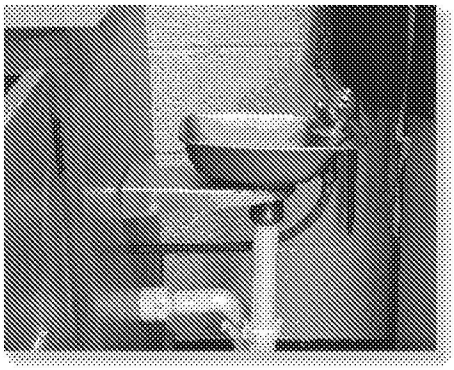
Outlet: Bubbler fountain (CF026)

Location: Classroom 14, west wall
Results: P1=36 parts per billion, P2=30 parts per billion
F1=17 parts per billion, F2=4 parts per billion

These results suggest the highest contribution of lead may be from the bubbler itself. This bubbler fixture appears to be made of chrome plated brass. This style bubbler typically has a 4-5-inch brass fitting that connects to a 3-inch brass nipple on the underside of the sink. This would explain the higher concentrations in the first two sample results. The connection underneath the sink may also have some brass components and should be checked, including the valve.

Replacement of this bubbler tap and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location and should be completed. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes prior to each use and for at least 4 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure. **In general, use of this fountain for drinking water should be discouraged.**

Outlet: Bubbler fountain (CF031)



Location: Proposed Pre-K Room, south wall
Results: P1=57 parts per billion, P2=3 parts per billion
F1=2 parts per billion, F2=non-detect

These results suggest the highest contribution of lead may be from the bubbler itself. This bubbler fixture appears to be made of chrome plated brass. This bubbler has a brass fitting connection to a brass nipple. The connector hose is not expected to be contributing lead.

Replacement of this bubbler tap and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location and should be completed. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlets With Lead Levels 15 Parts per Billion or Less

While the remaining 22 outlets showed sample results to be at levels requiring no further action, several recommendations have been identified.

The fourth sample at each of these 22 outlets following approximately 3 minutes of use and flushing at a reduced flow reduced lead concentrations to 4 parts per billion or less. This indicates that flushing of all taps used for drinking, cooking, and/or food preparation for 4 minutes following periods of stagnation will further reduce lead exposure. It is recommended that a flushing operational procedure be developed for use by staff responsible for plumbing operations and maintenance.

Twelve of these outlets are comprised of similar materials as the outlets listed above and could potentially experience higher lead levels under extended periods of stagnation. These faucets/fountains include:

- Sink Side Bubbler Units in Classroom 12 (CF022), Classroom 5 (CF009), Classroom 21 (CF028), Hallway Fountain (DW002), Classroom 15 (CF018), Classroom 17 (CF020), and Classroom 1 (DW005).
- Integrated Faucet Bubbler Fountain Units in Classroom 6 (CF010), Classroom 9 (CF012), Classroom 4 (CF008), Classroom 3 (CF007), and Classroom 7 (CF011).

Replacement of these fixtures with lead-free materials is also recommended.

The remaining 10 outlets showed sample results of 15 parts per billion or less, requiring no further action or additional recommendations. These faucets/fountains include:

- Sink Faucets in Classroom 1 (CF004), Classroom 15 (CF017), Classroom 17 (CF019), Classroom 12 (CF021), Classroom 19 (CF023), Classroom 14 (CF025), Classroom 21 (CF027), and Proposed Pre-K Room (CF030).
- Kitchen Sink (cold) in the Community Room (KC003).
- Sink Side Bubbler Fountain in Classroom 11 (CF016).

Consecutive Sampling Results and Building Plumbing Recommendations

The consecutive samples taken at three sites in the building on October 31, 2015, provide additional confirmation that the highest contribution of lead appears to be from the individual faucet/fountains and not from the larger diameter supply plumbing within the school building.

Consecutive Sample No.	1	2	3	4	5	6	7	8	9	10
LOCATION	LEAD RESULT (PARTS PER BILLION; ND = NOT-DETECTED)									
Proposed Pre-K Rm Sink Faucet (CF030)	2	1	ND	ND	ND	ND	ND	ND	ND	ND
Classroom 11 Sink Faucet (CF015)	62	8	8	7	7	7	7	6	6	6
Classroom 21 Sink Faucet (CF027)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND

The continued presence of lead in samples collected at Classroom 11 (CF015) may be a result of lead particulates caught in the aerator/screen installed on the faucet outlet or may be from a source of lead further back in the plumbing system. However, the non-detect results from consecutive samples collected in Proposed Pre-K Room (CF030) and Classroom 21 (CF027) suggest any additional source of lead associated with Classroom 11 (CF015) is localized to the plumbing branch serving this faucet. The faucet aerator/screen in Classroom 11 (CF015) should be removed and inspected before completing a more in-depth plumbing analysis. Consecutive sampling results at Classroom 11 (CF015) support the water use restrictions specified for this outlet.

Governor Rick Snyder
October 2, 2015
Daily Briefing

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Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
  - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
  - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
  - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
  - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
  - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
  - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
  - We encourage anyone with a concern to get their water tested.
  - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**
  - A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
  - This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
  - If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
    - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
    - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
    - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
    - This is a problem in communities statewide, and one we want to address with a long-term solution.
    - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
    - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
    - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
    -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
    - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.
    - She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
    - Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
    - As an additional precaution, water filters will be available to low-income families.
    - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
    - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
    - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.

        - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
        - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
    - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

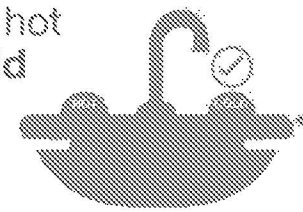
2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 1 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not been used recently.

If the City of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



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TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater.
State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Oct. 1, 2015

Michigan leaders to announce action plan for Flint drinking water

Friday, Oct. 2 at 1:30 p.m.
Local, state and federal leaders will host a press conference to announce a comprehensive action plan for addressing drinking water concerns in Flint. Participants will include:

- Harvey Hollins, Director of the Office of Urban Initiatives for Gov. Rick Snyder
- Dan Wyant, Director for the Michigan Department of Environmental Quality
- Nick Lyon, Director for the Michigan Department of Health and Human Services
- Dr. Eden Wells, Chief Medical Executive for the Michigan Department of Health and Human Services
- Dayne Walling, Mayor of Flint
- Other local, state and federal officials

Location:
Kettering University, Innovation Center
1300 Bluff St.
Flint, MI 48504

This is a media event open to credentialed news media only. Media who plan to attend this event should RSVP by noon Friday. Contact Rosemarie Olszewski at 517-284-6700 or olszewskir@michigan.gov.

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

October 1, 2015

Senate Elections and Government Reform Committee
House Elections Committee

Dear Honorable Members:

Attached is a comprehensive report that covers the results of the Secretary of State's Administrative Audit of the City of Flint's Elections Operations. As you know, this audit and report are required by Public Act 43 of 2015, which allowed the City of Flint to move forward with a city primary on August 4, 2015. The report covers several categories, with findings and recommendations for each.

The Bureau of Elections continues to work closely with the City of Flint to prepare for the city general election scheduled for November 3, 2015. If you have questions or need additional information, please contact Christopher Thomas, Michigan Director of Elections. Thank you.

Sincerely,

Ruth A. Johnson
Secretary of State

Attachment

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STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

FINDINGS AND RECOMMENDATIONS: ADMINISTRATIVE AUDIT OF THE CITY OF FLINT ELECTIONS OPERATIONS

October 2015

Background

Elections for the Mayor and select City Council positions in the City of Flint were scheduled to occur in 2015, with an August 4, 2015 primary and November 3, 2015 general election. In early 2015, the Flint City Clerk's office provided instructional packets to potential city office candidates which explained the filing deadline and process, along with other key steps related to the city election. Unfortunately, the information provided included an inaccurate candidate filing deadline. The mandated filing deadline for city offices in 2015 was 4:00 p.m. on April 21; the deadline published by the Clerk's office was 4:00 p.m. on April 28. The discrepancy was not discovered until after the April 21 deadline. Only one candidate filed timely by that deadline, and that filing was found to be insufficient, with petitions containing fewer than the required number of registered voter signatures. Several other candidates relied on the erroneous information and filed by the published April 28 deadline, but were unable to be certified for the ballot due to missing the true filing deadline. Due to these issues, the City of Flint was not scheduled to hold an August primary, and the only option for city office candidates would be to run as write-in candidates at the November 3, 2015 city general election.

As a result of this problem, the Michigan State legislature enacted Public Act 43 of 2015, which allowed the city nominating petition filing deadline in this case to be adjusted to the erroneously-published date. The law further established several other follow-up requirements, including the conduct of an administrative audit of the City Clerk's elections operations by the Secretary of State. This report summarizes the steps taken by the Secretary of State, Bureau of Elections (BOE) to conduct this administrative audit, including overall findings and recommendations.

Scope

On June 24, 2015, Bureau of Elections staff met with the Flint City Clerk and her staff to conduct the administrative audit. The meeting included detailed discussions and review of the city's election-related processes and materials, including:

- Staffing roles and responsibilities
- Candidate filings
- Utilization of State-issued training manuals, reference materials and communications

- Use of the Qualified Voter File (QVF) and Electronic Pollbook (EPB) programs
- Precinct and polling place structure
- Precinct Inspectors and training programs
- Absent Voter (AV) ballot issuance procedures and use of Absent Voter Counting Boards (AVCBs) on Election Day
- Election-related forms and supplies and Election Day precinct kit materials
- Use of Receiving Boards (RBs) on Election Day
- Prior election-related issues and problems

In addition, the Bureau of Elections worked collaboratively with the Clerk's office to plan for, attend and conduct several precinct inspector training sessions prior to the August 4, 2015 city primary. BOE staff also attended the Genesee County Board of Canvassers' meeting on August 5, 2015, where Flint's primary election results were certified.

Findings and Recommendations

The following information summarizes the Bureau of Elections' overall findings and recommendations with respect to the review of the City of Flint's elections operations:

Staffing

Staffing in the Flint City Clerk's elections division includes the Clerk and two full-time staff. A Deputy Clerk position was eliminated several years ago, leaving the Clerk to become solely responsible for the overall office organization and many of the day-to-day administrative duties. Three additional staff are available to assist during key election timeframes (prior to and up to Election Day). These staff members are shared with the city's business licensing area.

The full-time and shared staff all have several years of experience working in elections and have a good overall understanding of the key areas of election administration. The full-time staff are cross-trained to handle all major duties. The shared staff assist in conducting precinct inspector training, assisting walk-in customers during key election timeframes (e.g., absent voter ballot requests) and a variety of other duties to prepare for Election Day.

RECOMMENDATIONS - Staffing:

- Two full-time staff are insufficient to support elections in a municipality the size of Flint; The State strongly recommends that the City re-establish a Deputy Clerk position and, if possible, convert at least one of the shared staff positions to a full-time position, 100% assigned to election-related duties.
- If it is possible to add staff as recommended, the State recommends developing a more formal structure for specialty areas for assigned staff; especially with respect to training and communications.
- The re-establishment of a Deputy Clerk position would allow for additional focused improvements to be made in the overall organization of the office and additional delegation of administrative duties to staff; which, in turn would further improve the entire staff's ability to handle all required duties in a more proactive manner.

Candidate Filings

The Clerk's practice of preparing instructional packets for city office candidates is one that is practiced by many other municipalities. The content of these packets is obviously critical and should be informative, yet brief and easy to follow. The problem that occurred this year involved a single staff member that inaccurately calculated the filing deadline date – and the lack of review by others in the office of this critical piece of information. Flint's candidate packets for this year utilized appropriate petition forms, which were updated in early 2015. Flint staff review the packets with candidates as the packets are issued. Flint's procedure for processing candidate filings follows State guidelines and they appropriately utilize the QVF system for verifying petitions.

RECOMMENDATIONS – Candidate Filings:

- PA 43 of 2015 requires the City Clerk to submit city election filing information, calendars and petition forms for approval to the Secretary of State through the end of 2017.
- The City Clerk's office should establish and document the process for developing candidate information packets; in addition to the staff person that develops the information packet, procedures should include review by at least two other staff in the office.
- The Bureau of Elections regularly publishes *Key Dates and Deadlines* calendars for every election. These calendars are typically made available during the last quarter of the calendar year for the next upcoming election year. The developer of the city's candidate information packet should confirm key dates by referencing the BOE-published calendar. If candidate packets are prepared prior to the availability of the BOE calendars, Flint staff should confer with BOE and receive verification of the filing deadline in writing. Candidate packets should be kept as simple as possible.

QVF / Data Maintenance / AV Processing

QVF processing (including ongoing data maintenance) is handled by the two full-time permanent staff members. They appear to have an appropriate use and overall understanding of key voter registration and QVF processes. BOE staff reviewed the current status of Flint's portion of the State QVF and found that Flint appears to be conducting regular data maintenance (e.g., over 2,000 voters have been sent confirmation notices and are in the cancellation countdown process required by the National Voter Registration Act).

Absent Voter ballot processing: Flint does not utilize a permanent AV list. All staff (including shared staff) handle AV ballot requests and intake of voted AV ballots. Flint uses the QVF AV ballot tracker feature as required, which provides online updates to voters that AV ballots have been issued and received back from voters. It should be noted that Flint has continual issues with candidates and others submitting numerous AV applications, apparently in violation of State law. The Flint City Clerk regularly communicates with BOE on these issues and has developed a structured process for obtaining the identity of individuals submitting AV applications in bulk, reminding these individuals of the legal requirements and referring individuals to local law enforcement when there is evidence of possible law violations.

RECOMMENDATIONS – QVF / Data Maintenance / AV Processing:

- Processes appear sound.

- BOE will conduct a detailed review with Flint staff on all required data maintenance tasks (as we are doing with other jurisdictions).
- Flint should continue current practices with respect to handling suspected violations of AV ballot application requirements by certain individuals. Note that use of a Permanent AV list may assist with further ensuring the integrity of the AV application process.

Electronic Pollbook (EPB)

While Flint planned to begin using the EPB program in 2014, it had not implemented this program prior to August 2015. The State highly recommends use of the EPB program, as it has proven to be effective in speeding up processing on Election Day, reducing costs and increasing accuracy in assigning proper ballots to voters and recording voter history.

BOE recognizes that fully implementing EPB in a municipality the size of Flint is a large undertaking that must be approached carefully; specialized and targeted training is also required. BOE worked with Flint to pilot the EPB program in one precinct for the August primary. The program operated smoothly in that precinct.

RECOMMENDATIONS - EPB:

- BOE will continue to work with Flint on continued gradual expansion of the EPB program, which will include development of a detailed rollout and training plan for additional expansion in November 2015 and full EPB use city-wide in 2016.

Precincts / Polling Places

The City of Flint currently has 61 precincts. Although the structure seems to have been developed primarily to avoid the possibility of split precincts (e.g., in some elections, more than one ballot style would be required in a precinct with multiple county commissioner districts), the current structure is inefficient and contains several precincts with smaller than desired numbers. By law, an individual precinct can have no more than 2,999 active voters. For example, in Flint there is one precinct with 0 voters (apparently established because of a future planned residential development) and three precincts with less than 300 voters.

Flint's precinct structure is also challenging due to a State House split and unusually-constructed county commissioner district boundaries that conflict with City Ward boundaries. Of Flint's 26 polling locations, 19 house multiple precincts. Although temporary precinct consolidations are allowed in non-statewide elections, the Clerk and her staff are not in favor of changing the precinct structure temporarily in odd years due to the of steps needed to change the structure from year to year, and the possible need to communicate those changes to the city's voters in the odd year.

The City of Flint has also faced ongoing challenges due to the occasional closure of schools that also act as polling locations, creating an ongoing problem for the Clerk's office in finding and establishing new locations and communicating these changes to voters. Just this year, three schools that were previously polling places have closed.

RECOMMENDATIONS - Precincts / Polling Places:

- The Bureau of Elections recommends a significant effort toward permanently consolidating Flint's precincts. We have conducted an analysis of the current precinct structure and believe a model can be successfully pursued that would result in 40-45 precincts, as opposed to the current 61-precinct structure. Permanently consolidating precincts in many of the current polling locations that house multiple precincts is a logical step that should be easy to implement.
- Decreasing the number of precincts will help to alleviate problems with respect to having adequate numbers of pollworkers, equipment testing, AVCB processing timeframes and overall costs. Making these changes will entail additional training (and assignment of more experienced workers/chairpersons) in the few precincts that will now have occasional ballot splits. In addition, with implementation of the EPB city-wide, identification of the proper ballot style for each voter is simplified and easily identified by the program. The Bureau of Elections stands ready to assist the city in planning for and implementing these changes.
- BOE further recommends that the city consider temporary precinct consolidations in odd-year elections. Although employing a different precinct structure in the odd year will require changes to precinct kits and materials and a clear communication plan for voters, a step-by-step process template for implementing these changes can be developed that will allow for temporary consolidations in odd years to work smoothly. Use of temporary precinct consolidations in the odd year for city elections will also further cut costs and processing timeframes on Election Day.
- In the long-term (with the next redistricting cycle), BOE recommends that Genesee County consider changes to the current County Commission boundaries, to better coincide with the city's ward and precinct structure.

Polling Place Accessibility

Flint also faces challenges with respect to the accessibility of its current polling locations. Substantial Federal funding has been available since 2003 to cover the costs of needed structural improvements to polling places, to ensure full access to these facilities for voters with disabilities. Over the last few years, the city has come under the scrutiny of the U.S. Department of Justice because of complaints and concerns relating to polling place accessibility.

Prior to 2014, Flint utilized the available Federal grant program to complete improvements in only three polling locations. Starting in 2013, a dedicated BOE staff specialist provided direct assistance to Flint to assess polling locations, identify needed accessibility improvements and to develop and submit Federal grant funding requests to complete those identified changes. Due to these efforts, accessibility improvements have been completed in an additional 11 locations. Based on our assessments, there are still 11 additional locations that are in need of similar improvements.

While Federal grant funding has been available for several years, this program is reaching its end, and it is unlikely that these funds will be available to cover the costs of the remaining needed changes. Per Federal and State law, polling places must be fully accessible to voters

with disabilities, and Flint has an ongoing requirement to continue to identify needed changes and make these improvements, even if Federal funding is no longer available.

RECOMMENDATIONS - Polling Place Accessibility

- Flint must complete full accessibility assessments for any remaining polling location without a recent assessment on file (within the last five years). These assessments must be completed no later than March 2016.
- A plan must be developed to complete all identified needed changes in 2016. If Federal funding is no longer available, these plans must include plans for providing city funding.

Precinct Inspectors / Training / Precinct Materials

The training of precinct inspectors is critical to ensuring a smooth Election Day. Flint's pre-election training programs consist of numerous training sessions, and targeted training for specific groups (e.g., new election inspectors, experienced election inspectors, precinct chairpersons, Absent Voter Counting Board members and Receiving Board members). This is a logical approach to structuring training that is also used in other jurisdictions.

Over the past couple of years, the Clerk's office has begun to conduct detailed reviews and analyses after each election. These reviews occur precinct by precinct and identify Election Day mistakes and issues, including the inspectors/teams from each precinct. The Clerk has utilized this data to identify precinct teams that may need additional training or reassignment, or should be relieved of their duties. The data is also used to develop targeted training and hands-on sessions focusing on the topics that seem to be most problematic. These efforts are commended and should continue.

Prior to the August 4, 2015 Flint city primary, the Clerk's office scheduled 12 different training sessions. The sessions began in mid-July with an overall 'all workers' session that all inspectors were expected to attend. From there, the specialized group sessions began, with 2-3 sessions per group. All sessions generally followed a similar format, with both full group presentations and breakout sessions with hands-on exercises, focusing on a limited number of topics (typically, those issues most commonly identified by the post-election analyses, such as sealing ballot containers and completing end of night ballot summaries). BOE training staff attended these sessions and provided ongoing assistance and feedback to the Clerk throughout the process. At the final sessions that were conducted the week before Election Day, BOE training specialists also presented a structured session for each group that covered all key Election Day issues.

While the overall training schedule was established several weeks in advance of the primary, the format and structure for each individual training session was not planned extensively in advance. Several members of the Clerk's staff participated and presented at the various sessions, but the presentations generally consisted of a quick review of reminders, followed by break-out and hands-on type sessions that were more casual in nature. Decisions with respect to the overall training plan and the agenda/topics to be covered in each session seemed to be handled exclusively by the Clerk.

Flint has developed a series of job aids for their precinct inspectors, AVCB inspectors and Receiving Board members that provide step-by-step instructions covering each group's particular duties. The materials provided to the precinct inspectors include separate, color-coded instructions and reminders for opening the polls, closing the polls and delivery of precinct materials to the Receiving Board. These materials are well-structured for their purpose and seem to be well-used by the inspectors.

Flint continually struggles to recruit inspectors from both major political parties. The Clerk has increased her efforts to reach out to Republican Party officials in her area to obtain additional inspectors from this party to maintain the required political balance in each precinct.

RECOMMENDATIONS - Precinct Inspectors / Training / Precinct Materials:

- BOE supports the continued practice of conducting targeted training sessions for specialized groups (new inspectors, experienced inspectors, chairpersons, AVCB inspectors and Receiving Board members). As use of the Electronic Pollbook is further expanded, EPB inspectors should be added as a new specific training group.
- There was some confusion as to whether inspectors needed to attend a single training session or all identified sessions for their particular group. While it is reasonable to offer multiple training sessions for each group to allow for flexibility for inspectors' schedules, a specific agenda and topics should be developed for each session prior to the scheduled training, with clear direction to participants on which portions they need to attend.
- Attendance should be tracked, with follow-up for any non-attendees.
- The structure and format for each session should be established by the way of a standard reusable training template, utilizing a group presentation which includes a display (e.g., power point), handouts, and structured presentations by staff. BOE has provided template training presentations that can be utilized (and modified to meet Flint's specific needs) for new inspectors, experienced inspectors and chairpersons.
- All key Election Day processing steps should be regularly covered and reinforced - not just the most common problem issues. Exceptions and most commonly-missed items should also be highlighted, but in a structured presentation style – all that include time for group interaction and a question/answer period.
- Hands-on sessions should continue to be offered at the conclusion of the standard training presentations, as well as in a 'lab' or 'drop in' type mode currently offered by the Clerk's office.
- BOE strongly recommends that a dedicated staff person be established as a single point of contact in the office for training purposes. This person would be responsible for finalizing a reusable training template (for each specialized group), as well as the overall training schedule prior to each election and the specific training plans for each session. This resource would develop the full plan for each election cycle several weeks prior to the conduct of training – for approval by the Clerk.
- The Clerk should continue the practice of tracking specific types of problem issues that occur in each election, include reinforcement on those key points in subsequent training sessions and follow up with specific teams and inspectors as warranted.

- It should be noted that PA 43 of 2015 also requires the city's precinct inspectors to attend county-based training sessions in 2016 and 2017. BOE recommends that Flint continue to offer their regular targeted group training sessions in these years as well.
- The Clerk should continue to seek out and recruit inspectors that provide partisan balance (e.g., working with Republican Party officials in the area – even outside of Genesee County and/or at State level). The Clerk and her staff should also continue to seek out younger workers (e.g., high school and college students), who may be more adept at using the EPB program. The Clerk should also continue to mentor and encourage inspectors who show leadership potential to serve as precinct chairpersons in the future.

Absent Voter Counting Boards (AVCBs)

Over the past couple of years, the most notable problems in Flint's election process have involved the overall process and timeliness for completing Absent Voter Counting Board duties. AVCBs are used in many large jurisdictions to process all absent voter ballots in one location. The overall process and steps involved in completing Election Day tabulation in AVCBs are specialized and differ from in-person Election Day precincts.

Similar to the analysis conducted on Election Day precincts (mentioned above), Flint has similarly studied their AVCB operation and has recently made several positive structural changes. Earlier this year, Flint collaborated with other local clerks in the county to share AVCB best practices and develop a standardized model for AVCB processing. This was also a very positive step. Flint has used the new process in the past two elections which seems to have performed well, improved timeframes for completing AVCB processes on Election Night, and reduced incidences of problems.

RECOMMENDATIONS - Absent Voter Counting Boards (AVCBs):

- Flint should continue the use of the new countywide AVCB model and should continue the expansion of the number of teams employed to work in the AVCB. Flint should move towards the utilization of seven full AVCB teams, each working with one pollbook and tabulator. For the August 4 primary, only two teams were used, but in November, seven teams are planned. Use of additional AVCB teams will ensure more timely completion of AVCB duties on election night, but may also require additional training/support of additional inspectors that have not yet worked the new process.
- Flint should continue to use the countywide AVCB processing model, but should customize the instructions to create a Flint-specific training and instructional document for Flint's AVCB inspectors. Using this customized document, a Flint-specific AVCB training template and presentation should also be developed.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure more timely completion of the AVCB process in Flint, with fewer problems in completing and balancing each AVCB precinct.

Receiving Boards (RBs)

In recent years, some Election Day problems have occurred in Flint due to the inconsistent use of Receiving Boards. These boards, now mandated for use in every election, involve use of specialized precinct inspectors that receive materials from each precinct on Election Night,

confirm that ballot containers are properly sealed, and ensure that all materials are present and in balance and are delivered to the appropriate parties. These procedures prove to be very effective in ensuring a smooth canvass and election certification at the county level. In addition, the law mandates specific steps be used by Receiving Board inspectors, which cover all criteria used to declare a precinct recountable - therefore, greatly increasing the likelihood that all precincts can be recounted if necessary.

Over the past couple of years, Flint has developed a structured RB process, which includes a check-in table; 8-10, two-person RB teams; and a designated 'Problem Table' to focus in and resolve any precinct that appears to have problems. The RB training session included structured checklists, presentations by experienced RB members and sample materials with guidelines on precinct items that must be verified. This is a logical structure that seems to be working well.

The County Canvass process for the August 4 primary went very smoothly. One problem was identified (and resolved) that should have been caught by the RB teams, but the Canvassers reported that this past election was one of the best performed in recent memory.

RECOMMENDATIONS - Receiving Boards (RBs):

- Flint's revised RB process appears sound. This seems to be a well-working model that has helped to uncover and rectify problem issues while they can still be resolved. It is also appropriately used with the AVCB, which has been a main source of issues in the past.
- An overall lead worker should be assigned to oversee and study the Flint RB model, to help ensure that all problems are being identified and resolved and that the large number of precinct arrivals are moving fluidly through the system.
- Dedicated, experienced RB teams should be assigned to handle AVCB precincts as they arrive, to further ensure timely completion of the AVCB process and delivery to the county.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure fewer problems in Flint's Receiving Boards.

Working Relationship with County

Although not a specific point of review within the administrative audit, it should be noted that a clear conflict exists between the Genesee County Clerk and Flint City Clerk. Both parties express a high level of frustration, resentment and distrust of the other – which is extremely unfortunate and counterproductive to running problem-free elections. While there are experienced and hard-working staff in both offices, this negative relationship between the Clerks poses extreme challenges to running any election smoothly in Flint. The election administration responsibilities between the County and City differ, but these two entities must work together in every election.

There have been a number of instances where critical comments were made via the local media, some even on Election Day. The Bureau of Elections strongly recommends that the Clerks refrain from these types of actions, allow their staff to work productively and professionally together, and to set their differences aside when it comes to completing the

necessary steps prior to the election, on Election Day and through each election's canvass and final election certification. The Bureau further recommends that the Clerks refrain from airing differences publicly.

Overall Summary, Conclusions & Next Steps

Although a number of problem issues have been uncovered after recent elections in Flint, the Flint City Clerk and her staff are dedicated to studying their operations and are working to eliminate the source of possible mistakes; a challenge in a large jurisdiction with a small staff and hundreds of precinct inspectors. Several strengths are present which can be built upon, including:

- An experienced core staff with a strong overall grasp of election-related procedures and requirements;
- Experienced precinct chairpersons and inspectors who share the Clerk's goal to ensure problem-free elections;
- Targeted training programs that reinforce issues that are identified in post-election analyses;
- Revised Absent Voter Counting Board processes which have incorporated best practices of other jurisdictions and has already proven to streamline Flint's overall AVCB operation; and
- A renewed focus on the importance of the Receiving Board process and the final checks on Election Day to ensure recountability and a smooth county canvass.

In any organization with large and complex responsibilities, opportunities for improvements exist. The Bureau of Elections recommends a structured plan of action for implementing the recommendations offered in this report, with a primary focus on:

- Securing additional full-time election staff and a Deputy Clerk in the City of Flint;
- Detailed evaluation and consolidation of the current precinct structure (decreasing the number of precincts);
- Completing accessibility improvements in all polling locations;
- Development of formal procedures for compiling and reviewing key information distributed by the Clerk's office (e.g., filing deadlines and candidate packets); as well as data maintenance tasks (a BOE focus statewide);
- Continued development of a formal, reusable training template, along with a dedicated staff resource for developing the training plan prior to every election; and
- Gradual expansion of the use of the Electronic Pollbook city-wide.

The Bureau of Elections will continue to work with the Flint City Clerk and her staff to assist with preparations for the city's November 3, 2015 general election, to fulfill the remaining requirements of PA 43 of 2015 and to assist with implementing (where possible) the recommendations presented in this report.

Governor Rick Snyder
October 13, 2015
Daily Briefing

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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

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Deputy(s) 11/30
Director's Office Staff
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Prepared by:
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Division/Office WD
Log Letter No. SIR 00302
File No.
☐ Delogged
EQ 0110e (Rev. 1/2001)

April 21, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
United States Environmental Protection Agency
Washington, DC 20460

Dear Mr. Grumbles:

SUBJECT: State Programs to Control Lead in School Drinking Water

Thank you for your letter of March 18, 2004, requesting information on efforts being taken by the Michigan Department of Environmental Quality (MDEQ) to control lead in drinking water at schools and day care facilities. The following information has been assembled by staff in our Water Division (WD) having the regulatory responsibility for public water systems.

The WD continues to actively implement the requirements of the Lead and Copper Rule (LCR) authorized by the 1986 amendments to the federal Safe Drinking Water Act, 1976 PA 399, as amended. In Michigan, we have approximately 900 schools and day care centers that meet the definition of a nontransient noncommunity (NTNC) public water system. All of these systems rely on groundwater as their source. Fortunately, groundwater in Michigan is not typically corrosive or conducive to significant lead leaching from water system components.

As specified by the LCR, routine monitoring for lead and copper has been and continues to be conducted in these NTNC systems. Our experience has shown lead levels to be acceptable in these schools and day care centers when samples have been correctly collected from actual drinking water taps. From 1999 to 2003, the MDEQ laboratory analyzed 14,207 lead samples from NTNC public water systems. Only 2.4 percent of these sample results exceeded the lead action level of 15 parts per billion (ppb). Over 94 percent of these results reported lead levels less than or equal to half the lead action level of 7.5 ppb, with 37 percent reporting lead as not detected. On the rare occasion that one of these NTNC systems exceeded the lead action level, the owners have typically eliminated exposure by supplying bottled water or removing the offending tap until a long-term solution has been instituted. Rarely have the elevated lead levels been attributed to a system-wide problem. In Michigan, it has been repeatedly demonstrated that elevated lead levels from drinking water taps in schools are diminished by fixture replacement. In the last 5 years, we have had only 10 action level exceedences reported from a total of 1,750 NTNC public water systems. Only two of these systems have had to install corrosion control treatment.

In your letter, you state that schools are only subject to the requirements of the LCR if they have their own water system. This statement implies there is no benefit to those schools served by community public water systems. The WD feels strongly that the LCR does provide a significant benefit to schools and day care centers that are served by community public water systems (CPWS). Despite limitations in these regulations that severely restrict CPWS from using schools and day care centers as sampling sites, proper implementation of this regulation should result in reduced lead exposure for all customers. For instance, schools and day care centers connected to CPWS serving more than 50,000 residents benefited from the LCR because these water systems have had to demonstrate and maintain optimal corrosion control. These large systems were required to reduce lead levels throughout their water system to the lowest levels possible. In addition, schools and day care centers connected to CPWS serving 50,000 or fewer residents have benefited from proper implementation of the LCR because these water systems have had to achieve and maintain compliance with the lead action level. Furthermore, any CPWS that exceeded a lead action level also had to provide public notification and public service announcements in accordance with and on a frequency specified by the LCR. Therefore, schools and day care centers in these systems could choose to provide an alternate drinking water source until compliance was achieved and lead levels were reduced in their CPWS.

Your letter also references the Lead Contamination Control Act (LCCA) of 1988, which recalled drinking water coolers with lead-lined water reservoir tanks and banned new drinking water coolers with lead parts. This law caused Michigan's state plumbing board to make changes in the construction code to ban lead materials in other drinking water system components as well. Items such as 50/50 lead-tin solder for household plumbing, lead packers and lead wool used for well screens, and brass fixtures having greater than 8 percent lead were among the items banned from future use in potable water systems.

In 1988, prior to the LCCA, NTNC schools in Michigan were informed of the requirement to provide public notice regarding the potential for lead in drinking water, and they were mailed an example notice to use. All Michigan schools supplied by CPWS were also mailed the same information with a recommendation that they provide similar public notice although it was not required by law.

In 1989, over 8,000 Michigan schools and day care centers were mailed information on the LCCA. We cited concerns about lead levels and recommended a sampling and flushing protocol be instituted at all taps used for consumption, not just the water coolers required by the LCCA. In addition, staff of the WD made presentations to state school business officials and to the environmental health association representing local health departments. Articles were also published in school and day care association newsletters.

In 1989, we also conducted a random telephone survey of 40 schools and 40 day care centers (both NTNC and those connected to another water system) regarding the LCCA. Seventy-five percent of the schools were aware of the LCCA requirements and 50 percent had performed some monitoring, while 40 percent of the day care centers were aware of the LCCA requirements, and about 20 percent had sampled.

In 1990, a second mailing to all 8,000 schools and day care centers was conducted, with updated information on the recall of water coolers as required by the LCCA and with the recommendations developed in Michigan on flushing drinking water outlets. In this letter, we also asked that any sample results be reported to us even though they were specifically not required to do so by the LCCA. About 30 of 500 school districts reported results from 720 "first draw" samples taken in over 200 buildings; 2.5 percent of these results exceeded the maximum contaminant level (MCL) of 50 ppb in effect at that time for lead, 8.6 percent exceeded 20 ppb, and 17.5 percent exceeded 10 ppb. It should be noted that all (104) flushed sample results reported lead levels less than 10 ppb. We also noted that the overall average levels in first draw samples collected from kitchen faucets were higher than levels from the targeted lead lined water coolers that were the focus of the LCCA. As a result of this data, state staff did pilot testing in three school districts and provided technical assistance to schools and day care centers. Follow-up sampling and investigations were also accomplished by state staff in other school districts.

As you mentioned, the LCCA also established a technical assistance program to support state activities to reduce lead contamination in schools. The WD is aware of the United States Environmental Protection Agency (USEPA) technical assistance fact sheets, technical bulletins training seminars, and the publication, "Lead in School Drinking Water." As discussed, we conducted several mailings, made numerous presentations, conducted follow-up surveys, responded to requests for assistance, participated in several pilot tests to reduce lead levels, compiled data, conducted additional sampling, and responded to many telephone inquiries with appropriate technical assistance. All of these activities constitute our technical assistance program. However, no funding has ever been allocated to states for implementation of the LCCA. All of the activities performed by Michigan in response to the requirements of the LCCA were done so with resources diverted from other programs. The primary requirement of the LCCA was for schools that identified coolers on a list of those suspected to contain lead lining to repair, replace, remove, or sample to show that these coolers did not contribute to lead in the drinking water. If the schools did sample, they were also required to tell their customers that results were available. If schools had no coolers on the list, nothing further was required by the LCCA. Despite this limited application of the LCCA, Michigan has performed numerous activities beyond the scope specified in the LCCA without any federal funding.

Finally, you ask what the USEPA can do to further efforts in this voluntary program. We have several suggestions. First, we recommend that the USEPA consider allowing schools to be considered Tier 1 sampling sites in CPWS so that we can gain more information on possible lead exposure in schools. Allowing CPWS to use schools will afford them an opportunity to use sampling sites that are more accessible than private homes, more likely to be geographically distributed throughout their system, and likely to satisfy a large constituency (parents). From our experience, we also recommend that the USEPA consider a sampling protocol for schools that would determine if the fixtures at kitchen taps are a problem that could be simply resolved by replacement. The USEPA may also want to consider requiring the owner of these facilities to replace any remaining lead service lines supplying schools or day care centers.

In conclusion, we understand that the detection of elevated lead levels at customer taps in Washington, DC, has caused the USEPA to focus on this issue. However, the MDEQ wants to emphasize that despite the limitations in this law, proper implementation of the LCR accomplishes adequate reduction in lead levels. Failure to carry out some rule provisions in one case should not be cause for disparaging implementation across the country, or for unnecessary revamping of this regulation. If you need further information or assistance, please contact Mr. James K. Cleland, Assistant Division Chief, WD, at 517-241-1287, or you may contact me.

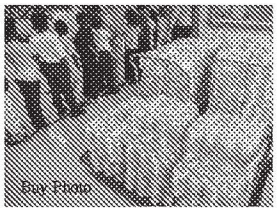
Sincerely,

Steven E. Chester
Director
517-373-7917

cc: Mr. Stanley F. Pruss, Deputy Director, MDEQ
Mr. Jim Sygo, Deputy Director, MDEQ
Ms. JoAnn Merrick, Senior Executive Assistant to the Director, MDEQ
Mr. Andrew W. Hogarth, MDEQ
Mr. Richard A. Powers, MDEQ
Mr. James K. Cleland, MDEQ

Chemical testing could have predicted Flint's water crisis

By John Wisely and By Robin Erb, Detroit Free Press *7:14 a.m. EDT October 11, 2015*



(Photo: Ryan Garza, Detroit Free Press)

Chemical tests could have predicted the corrosion in the pipes that is now being blamed for endangering the health of thousands of vulnerable Flint residents by elevating lead levels in their water supply, experts say.

As the city scrambles to reconnect to the Detroit water system, the absence of such testing on the Flint River water is one of many missed opportunities that might have lessened or avoided the crisis, they say.

"Any competent person should have seen this water will eat up iron and eat up lead," Marc Edwards, a Virginia Tech professor and national expert on pipe corrosion, told the Free Press. Edwards said his own research shows that Flint River water, without additional controls, corrodes the lead inside pipes at 19 times the rate of water piped from Detroit.

DETROIT FREE PRESS

Why are lead levels in children higher in 2 Flint ZIP codes?

(http://www.freep.com/story/news/local/michigan/2015/10/10/lead-danger-basics/73683934/)

Among red flags that popped up over the last 18 months:

- General Motors announced in October 2014 that it was pulling its engine plant off Flint water after workers there began noticing rust spots on newly machined parts. The city approved letting GM switch to water from Flint Township, but didn't change its own water treatment procedures.

- The University of Michigan-Flint alerted city officials that it found elevated lead levels in its water in January, prompting the school to shut off some some drinking fountains and add water filters to others.

- Testing in the fall of 2014 found E. coli in the city's water system, prompting "boil water" notices. The city's procedures for killing the E. coli produced chemical by-products known as trihalomethanes, which can cause cancer with long-term exposure. The city had to adopt additional measures to reduce them.

"Common sense tells you that the Flint River is not your first choice of drinking water," said Shawn McElmurry, who teaches civil and environmental engineering at Wayne State University and has followed Flint closely.

DETROIT FREE PRESS

Q & A on Flint's water troubles

(http://www.freep.com/story/news/local/michigan/2015/10/10/flint-water-qa/73693500/)

Experts say the testing could have been done before the switch from the Detroit system. But officials from the Michigan Department of Environmental Quality note that that kind of testing isn't required under federal drinking-water rules and has never been done in Michigan. What's more, they said, the Flint River water, treated in the city's plant, was already approved as a backup supply in case of interrupted service from Detroit.

Other experts said the testing is more nuanced, part art and part science. Still, they acknowledge that by examining things such as the acidity of water and other factors, engineers could have estimated how much corrosion to expect once water from the Flint River was pumped into homes and businesses across the city.

"Not every engineer in our field could do it, it's a pretty specialized area," said David Cornwell, a Virginia-based engineering consultant and a technical adviser to the National Drinking Water Advisory Council, a group of experts that works with the Environmental Protection Agency on drinking water issues.

DETROIT FREE PRESS

Flint doctor makes state tell lead truth

(http://www.freep.com/story/news/local/michigan/2015/10/10/hanna-attisha-profile/73600120/)

The fix now will cost $12 million — a combination of money from the state, the city and the Flint-based non-profit C.S. Mott Foundation, which has pledged $4 million to help pay Detroit for the water while Flint waits to connect to a new water authority in partnership with Genesee County.

Water woes began shortly after switch from Detroit

Flint began using Flint River water as its main supply in April 2014. Before that, it bought Lake Huron water that was treated and delivered by the Detroit Water and Sewerage Department. Detroit ended that deal one day after Flint voted to join Genesee County in forming the Karegnondi Water Authority, which plans to build its own Lake Huron intake and pipe the water to the Flint Water Plant.

Flint officials wanted to remain on Detroit's system, but the two sides couldn't agree on a price and a contract length.

Once the switch to river water was made, the city, which was operating under a state-appointed emergency financial manager, faced one problem after another. Residents packed city council meetings and held protest marches to voice their anger about water quality.

Experts say Flint's lead problems could have been held in check if the city had added phosphates to the water, as Detroit has done for years. The treatment doesn't eliminate lead entirely, but it does form a film over the pipes themselves, effectively sealing in the lead and reducing the amount in the water to acceptable levels.

But when Flint switched to river water, it didn't add phosphates. Instead it added lime to soften the water.

"The lime softening process has the added benefit of some corrosion control," said Liane Smith, chief of Michigan's Office of Drinking Water and Municipal Assistance.

Smith said that once the switch was made, the state began testing for lead and copper, as is required by the federal Environmental Protection Agency.

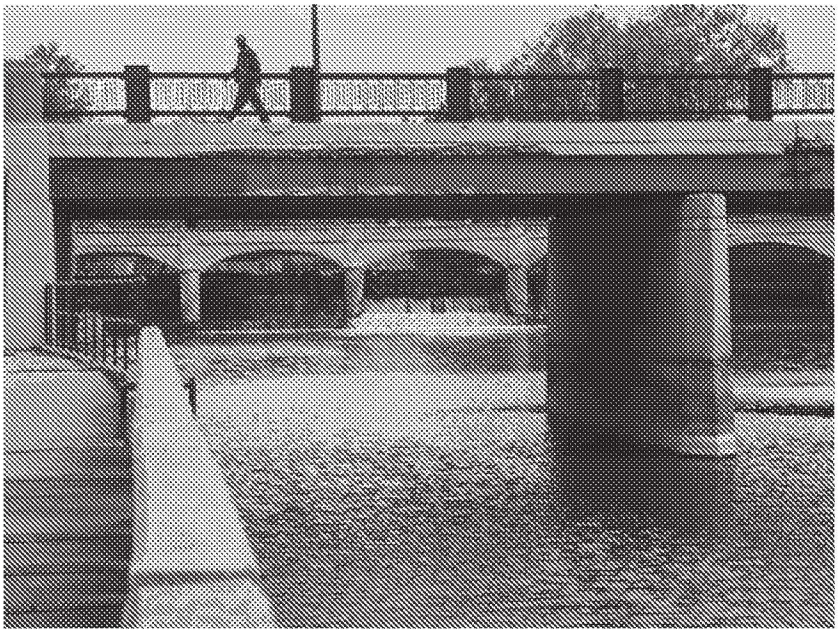
"Any new supply that comes along has to do two six-month rounds of monitoring for lead and copper out in their distribution system," Smith said. If those tests show corrosion, additional steps, such as perhaps adding phosphates, are supposed to be followed.

The first round of testing completed in December 2014 showed lead levels of 6 parts per billion. The second round, completed in June of this year, showed they had almost doubled to 11 parts per billion. The EPA requires a remediation plan when levels reach 15 parts per billion and can demand action even below that mark on systems that serve more than 50,000 people.

Cornwell said phosphates are considered more effective than lime softening and they don't raise treatment costs substantially. But they have side effects, he said.

"The negative is that nobody really likes phosphates out in the environment," he said, noting they can find their way into rivers and lakes, fueling algae blooms such as the ones in Lake Erie.

"There is more to it than saying we're just going to pump phosphates," Cornwell said. "You may have to make other adjustments."



A man crosses a bridge over the Flint River near the Hamilton Dam in downtown Flint on Thursday, Oct. 8, 2015. Flint has been getting its drinking water from the river since last year. *(Photo: Ryan Garza, Detroit Free Press)*

Flint River water a challenge to clean up

Flint River water was always going to pose more treatment challenges than the cold, clear water that comes from the bottom of Lake Huron, experts said.

The river has been marked by decades of industrial pollution. Its tributaries channel farmland run-off into it and its temperature varies by season. Warmer water can promote bacteria growth. All of those factors make treating it to drinking-water standards more difficult.

"The city was doing the best it could" to clean up pollutants, Edwards said, but added that corrosivity was inevitable.

He blamed the problems on a lack of expertise rather than intentional wrongdoing.

"I think it started relatively innocently. They didn't understand testing and they didn't understand corrosivity," he said.

Last month, Edwards' research group released results of corrosion tests it conducted on Flint's water. For the test, researchers used copper pipe with lead solder, which is common in older homes.

The tests showed Flint River water without added phosphates corroded the lead at 19 times the rate of Detroit water. Even when phosphates were added, it corroded at 16 times the rate of the Detroit water.

"From the second it was switched, it was doomed from the lead problem," Edwards said.

When residents began complaining about the water, the city and state should have begun to rethink their testing, Edwards said.

Problems were evident soon after the switch.

In August last year, E. coli was found in the water and residents were urged to boil it before drinking it. The city treated it with disinfectant, but that produced by-products in the water known as trihalomethanes. Long-term exposure to them can cause cancer, so the city began making treatment adjustments.

Then as summer turned to fall, workers at Flint's GM engine plant began seeing rust on newly machined engine parts. GM's lab tests found high levels of chloride in the water used to wash down metal shavings and cool parts heated from the rapid machining action inside the plant, GM spokesman Tom Wickham said.

GM tried to treat the water in the plant. It had drinking water delivered and tankers brought water for operations, Wickham said.

But it eventually sought to connect to Flint Township's water system, which is supplied by Detroit.
In December the connection was finalized and Detroit water began flowing to the plant, via Flint Township.

In January 2015, lead was showing up at the University of Michigan's Flint campus. School leaders become concerned about the water supply after the city issued "boil water" advisories to kill E. coli and realized they'd never done routine, thorough water testing.

Tests in January and February showed elevated levels of lead and other problems in isolated areas —specifically in two infrequently used drinking fountains in two older buildings.

Follow-up testing found other elevated levels of lead, and those sinks and fountains then were either fitted with filters or removed, said Mike Lane, director of the environment, health and safety department

He said officials suspected the problem was in their pipes but notified the city anyway.

In June, Miguel Del Toral of the Environmental Protection Agency drafted an internal memo noting the problems Flint had experienced with E. coli and the by-products of the chemicals used to treat it.

"A major concern from a public health standpoint is lack of corrosion control treatment in the city of Flint for mitigating lead and copper levels in the drinking water," Del Toral wrote.

The memo caused a stir when the American Civil Liberties Union exposed it. But the EPA told the Free Press on Friday that the memo was a draft that was never delivered to MDEQ officials, including Smith, whose names appear on it.

The EPA did say it discussed the concerns raised in the memo with MDEQ officials in July, but the agency did not respond immediately to a request for details.

Leaching lead not unique to Flint

The problem of lead leaching into drinking water isn't unique to Flint. Across Michigan and around the country, pipes that carry water from the mains under the street into homes, businesses and schools often contain lead. Inside homes and business, many older plumbing fixtures and soldered pipes also contain it.

Cornwell said officials from across the nation have formed a working group to review the lead and copper rules and look for ways to improve them. Among the things being considered is a national effort to remove lead pipes from water systems.

But even if a national consensus formed around that idea, the process would take years, Cornwell said. A funding source for such a massive project also would be needed.

Still, he said, removing the pipes is the only surefire way to eliminate lead from the system.

"We can only do so much with water chemistry," he said. "We can only turn the knob so much."

Contact John Wisely: 313-222-6825 or jwisely@freepress.com

Contact Robin Erb: 313-222-2708 or rerb@freepress.com.

TIME LINE

April 16, 2013: Flint signs agreement to join the Karegnondi Water Authority.

April 17, 2013: Detroit terminates contract with Flint, giving it one year to find a new water source.

April 24, 2014: Flint switches from Detroit water to Flint River water.

April 30, 2014: Flint closes all valves connecting to Detroit water supply.

June-Sept. 2014: Flint residents complain about smell, taste and discoloration of water.

Dec. 16, 2014: Michigan Department of Environment Quality cites Flint for exceeding limits on disinfection by-products.

Dec. 27, 2014: Flint's General Motors engine plant, citing high chloride levels in the water, switches off its hook-up to Flint, drawing water instead from neighboring Flint Township.

Jan. 9, 2015: Concerned about Flint's water warnings, University of Michigan's Flint campus begins testing its water, detecting lead in isolated,

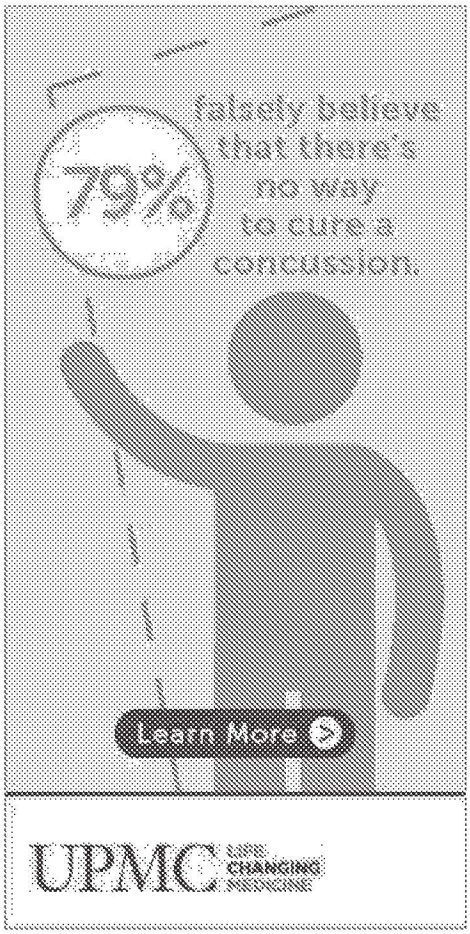
infrequently used areas.

June 24, 2015: Environmental Protection Agency drafts a report raising concerns about lead in Flint's water system as a result of corrosion. It doesn't send the report, but discusses its concerns with MDEQ officials in July.

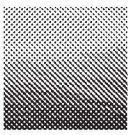
Sept. 24, 2015: Dr. Mona Hanna-Attisha releases data showing spike in blood-lead levels in Flint children.

Oct. 2, 2015: State officials tell room packed with reporters that there's a problem with Flint's water.

Read or Share this story: http://on.freep.com/1LoJP7S



MORE STORIES



MSU researchers studying algae on Torch Lake

(/story/news/local/michigan/2015/10/12/michigan-state-researchers-studying-algae-on-torch-lake/73803582/)

(/story/news/local/michigan/2015/10/12/michigan-state-researchers-studying-algae-on-torch-lake/73803582/)

Oct. 12, 2015, 6:43 a.m.

Bedan, Morgan (GOV)

From: Wyant, Dan (DEQ)
Sent: Monday, October 12, 2015 1:56 PM
To: Thelen, Mary Beth (DEQ)
Subject: FW: Filter distribution data

From: Lasher, Geralyn (DHHS)
Sent: Friday, October 09, 2015 5:44 PM
To: Wyant, Dan (DEQ); Lyon, Nick (DHHS); Grijalva, Nancy (DHHS); Wurfel, Brad (DEQ); Minicuci, Angela (DHHS); Eisner, Jennifer (DHHS); Hertel, Elizabeth (DHHS)
Subject: Filter distribution data

MDHHS purchased total water filter distribution 10/6-10/9 = 7,731

Tuesday
4,588 filters were distributed through MDHHS offices, GCCARD the local Community Action Agency, Flint Housing Commission, Early Head Start, Mott Park Neighborhood Association and Commissioners.

Wednesday
1,438 filters were distributed through MDHHS offices and GCCARD.

GCCARD is coordinating filter installations for seniors and home bound individuals. The UAW pipe fitters are donating in kind services of $20,000 for this installation. United Way has given filters to homeless shelters and any undocumented immigrants that have come to the Center. Filters were delivered to several senior housing complexes for maintenance to install.

Thursday
1046 filters were distributed through MDHHS offices and GCCARD.

MDHHS is also working to inform licensed non-school based daycares on where to get water filters.

Friday
635 Filters were distributed through MDHHS offices and GCCARD. **24** water pitchers were distributed as well

City of Flint Water
Action Steps for Week of October 12-16

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Identify schools and prioritize for assessment	GCISD, GCHD, DEQ, DHHS, and Flint	Steve Busch	
2.	Get DLARA plumbers organized	DEQ and DLARA	Steve Busch	
3.	Complete sampling instructions	DEQ, DHHS, and EPA	Pat Cook	
4.	MDARD information for restaurants	MDARD, DHHS, and DEQ	Dana DeBruyn	
5.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	
6.	Approve Flint plan for water line	DEQ, Flint, and Genesee County	Mike Prysby	
7.	Lead education plan for schools for drinking water	DHHS and DEQ	Liane Shekter Smith	
8.	Begin regular meetings with Flint	DEQ and Flint	George Krisztian	
9.	Schedule Water Treatment Plant tour	DEQ and Flint	George Krisztian	
10.	Meet with schools and DLARA – invitation only	DEQ, DLARA, and Flint schools	Karen Tommasulo	
11.	Update DEQ Web page	DEQ	Karen Tommasulo	
12.	Contact DHHS to see where they are with United Way regarding emergency declaration	DEQ and DHHS	George Krisztian	
13.	Circulate protocol draft with EPA	DEQ and EPA	Liane Shekter Smith	
14.	Contact city about homeowner sample delivery	DEQ and Flint	George Krisztian	
15.	Communicate to MDARD and Flint that business samples should be coordinated though DEQ laboratory	DEQ, MDARD, and Flint	Liane Shekter Smith George Krisztian	Liane to call MDARD and George to call Flint

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
16.	Figure out number of samples from schools and child care facilities	DEQ	Liane Shekter Smith Pat Cook Steve Busch	
17.	Confirm Linda Dykema is Point of Contact for DHHS	DEQ	George Krisztian	Done
18.	Contact KWA to find out if there are any bottlenecks we need to remove	DEQ and KWA	Mike Prysby	
19.	Expedite 399 Plan and Phosphate Plan	DEQ and Flint	Mike Prysby	
20.	Get update on service line index card conversion and identify where partial replacements exist	DEQ and Flint	Steve Busch	
21.	Make sure DHHS gets information so they can cross reference	DEQ and DHHS	Steve Busch	
22.	Legislative contacts	DEQ	Maggie Pallone	Conference call with Sen. Jim Ananich scheduled for October 12 at 3 pm
23.	Legislative time line and summary	DEQ	Maggie Pallone	
24.	Reconnect with State Superintendent Brian Whiston	DEQ and Department of Education	Dan Wyant	Call scheduled for October 12 at 4:30 pm
25.	Conduct After Action Plan	DEQ	George Krisztian	To be scheduled for October 15
26.	Change Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone Liane Shekter Smith Sonya Butler	

Governor Rick Snyder
October 14, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 12-16

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Identify schools and prioritize for assessment	GCISD, GCHD, DEQ, DHHS, and Flint	Steve Busch	Done 10/13/15
2.	Get DLARA plumbers organized	DEQ and DLARA	Steve Busch	
3.	Complete sampling instructions	DEQ, DHHS, and EPA	Pat Cook	
4.	MDARD information for restaurants	MDARD, DHHS, and DEQ	Dana DeBruyn	
5.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	
6.	Approve Flint plan for water line	DEQ, Flint, and Genesee County	Mike Prysby	Chlorination/disinfection of 72-inch main begun
7.	Lead education plan for schools for drinking water	DHHS and DEQ	Liane Shekter Smith	
8.	Begin regular meetings with Flint	DEQ and Flint	George Krisztian	Request made on 10/12/15; waiting for response
9.	Schedule Water Treatment Plant tour	DEQ and Flint	George Krisztian	Request made on 10/12/15; waiting for response
10.	Meet with schools and DLARA – invitation only	DEQ, DLARA, and Flint schools	Karen Tommasulo	
11.	Update DEQ Web page	DEQ	Karen Tommasulo	Done 10/12/15
12.	Contact DHHS to see where they are with United Way regarding emergency declaration	DEQ and DHHS	George Krisztian	Request made on morning of 10/13/15
13.	Circulate protocol draft with EPA	DEQ and EPA	Liane Shekter Smith	
14.	Contact city about homeowner sample delivery	DEQ and Flint	George Krisztian	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
15.	Communicate to MDARD and Flint that business samples should be coordinated though DEQ laboratory	DEQ, MDARD, and Flint	Liane Shekter Smith George Krisztian	Liane to call MDARD and George to call Flint
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26.	Change Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone Liane Shekter Smith Sonya Butler	

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Coordinating Efforts Meeting on October 12, 2015

DEQ, DHHS, and DLARA met to discuss coordinating efforts for the Flint Action Plan. Issues discussed were:

- Flint is in the process of prioritizing schools for lead and copper testing. Should have list by COB October 14, 2015.

- Flint is sending out 3rd quarter reports incorporating input from the Technical Advisory Committee.

- Weekly meetings are being set up with agency points of contact from DEQ, DHHS, and DLARA. These contacts are:

  George Krisztian (DEQ)
  Linda Dykema (DHHS)
  Shelly Edgerton (DLARA)

- DEQ is in the process of setting up weekly meetings with Mayor Dayne Walling. DHHS and DLARA will name representatives for these meetings. The initial meetings will be face-to-face, and then the use of conference calls will be evaluated later.

- DEQ is setting up a tour of the Flint Water Treatment Plant. Representatives from DHHS and DLARA will be included.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
Cell: 517-204-0381
October 13, 2015

Bedan, Morgan (GOV)

From: Agen, Jarrod (GOV)
Sent: Tuesday, October 13, 2015 4:14 PM
To: Dickinson, Sarah (GOV); Bedan, Morgan (GOV)
Cc: Scott, Allison (GOV); Clement, Elizabeth (GOV); Muchmore, Dennis (GOV)
Subject: Flint Timeline
Attachments: 1st letter to blend.pdf; 2nd request to blend.pdf; KWA Approval.pdf; Kurtz KWA.pdf; DWSD Termination Ltr.pdf

Importance: High

Can we put into Gov's briefing tonight?

Kurtz was EM at time of final decision/move to switch to KWA. Earley was EM at time of switch to Flint River water.

Flint EM dates (financial emergency declared in December 2011)

Mike Brown, apptd 12-1-11 (when fin emer declared under PA 4 of 2011)
Ed Kurtz, apptd 8-8-12 (when PA4 was repealed in Aug 2012, Brown couldn't serve as EM, PA 72 back in effect)
Mike Brown, apptd 7-4-13 (Kurtz retired; PA436 in effect)
Darnell Earley, apptd 10-8-13 (Brown resigned)
Gerald Ambrose, apptd 1-13-15 (Earley appointed DPS EM)

Financial Emergency resolved, 4-29-15 (RTAB apptd)

Other dates

June 26, 2012 – Letter from EM Brown to DWSD seeking permission to blend river water with DWSD water (attached).

Sept. 20, 2012 – Letter from EM Kurtz to DWSD requesting written permission to implement blending (attached).

March 25, 2013 – The Flint City Council endorses joining KWA (see url below)
http://blog.mlive.com/newsnow_impact/print.html?entry=/2013/03/flint_city_council_approves_re.html

April 11, 2013 – Treasurer Dillion sends letter to EM Kurtz (attached) noting conditional approval of move to KWA (pursuant to PA436), pending a review of DWSD's last, best offer.

April 16, 2013 – EM Kurtz informs Treasury that the City will join KWA (attached).

April 17, 2013 – DWSD transmits letter to EM Kurtz terminating service to Flint, effective April 17, 2014 (attached).

April 17, 2014 – Water service from DWSD officially ends.

CITY OF FLINT

Infrastructure and Development

Dayne Walling
Mayor

Michael K. Brown
Emergency Manager

Howard D. Croft
Director

June 26, 2012

Sue F. McCormick
Director DWSD
735 Randolph St.
Detroit, MI 48226

Dear Ms. McCormick,

In cooperation with the Michigan Department of Environmental Quality (MDEQ) and city engineers, the City of Flint has undertaken a review of the regulatory requirements necessary to supply water to our residential and commercial customers. As part of our evaluation it was determined that the Flint Water Treatment Plant is capable of successfully "blending" or "co-mingling" water sources while continuing to provide quality drinking water to citizens.

The Flint Water Treatment Plant would require approximately $1.3 million dollars in increased expenses in order to blend as much as one third (1/3) of treated river water with two thirds (2/3) of treated DWSD water. Using the 2013 DWSD rates this would result in savings of between two and three million dollars annually based on current usage data. The MDEQ has provided Flint with written documentation supporting our blending of water sources and the potential benefit.

Given this information we respectfully request written permission from DWSD to proceed with blending treated Flint River Water with treated DWSD water.

It should be understood that our goal is to deliver both high quality and economically viable water to our customers. This goal has led us to fully consider all available options including purchasing water from the Karegnondi Water Authority and use of the Flint River. We believe that in order for an option with DWSD to be successful it is essential that along with the proposed authorization to blend water that there is a guaranteed containment of the new "fixed costs" that exist in the current fee structure. The new DWSD fixed charge of $707,000 each month regardless of amount of water used is five times the original $143,000 each month instituted only two years ago. This has resulted in the cost of water from DWSD dropping in recent years as the overall fee has increased annually by millions although our usage has continued to decline. The continuation of this trend would render our request and goals invalid.

With the current Emergency Manager condition in Flint we believe that limiting an agreement to only three years is appropriate. This time frame would also serve as an evaluation period prior to any proposed long term agreement being considered.
We appreciate your consideration and look forward to working together.

Sincerely,

Michael K. Brown
Emergency Financial Manager Flint, Mi.

Edward J. Kurtz
Emergency Financial Manager

Dayne Walling
Mayor

September 20, 2012

Sue F. McCormick & DWSD Board
Director DWSD
735 Randolph Street
Detroit, MI 48226

Dear DWSD Board:

During the past nine months we have had several discussions with DWSD representatives regarding future water rates and other options including permission for Flint to blend treated water from DWSD. Flint currently has received written documentation from the state regulatory agency DEQ supporting the ability for Flint to safely blend treated water from Detroit.

In an effort to move forward we must have a written response from the DWSD Board that clearly states the following:

Will DWSD allow Flint to blend treated water from Detroit?

What are the rates given an estimated usage by Flint and Genesee County of:

- 23 MGD Average Daily Usage
- 40 MGD Maximum Day Usage

We are requesting this information be delivered to Flint no later than **October 1, 2012** so that we may evaluate all of our options and begin moving forward.

Sincerely,

Edward J. Kurtz
Emergency Financial Manager

City Hall
1101 S. Saginaw Street - Flint, Michigan 48502
810-766-7346 FAX: 810-766-7218 www.cityofflint.com

89 (Rev. 02-11)

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

ANDY DILLON
STATE TREASURER

Mr. Edward Kurtz
Emergency Manager
City of Flint
1101 South Saginaw Street
Flint, MI 48502

April 11, 2013

Dear Mr. Kurtz:

Thank you for your March 29, 2013 letter, which is attached for reference. As the Emergency Manager for the City of Flint ("Flint" or "City"), you have asked for my concurrence, pursuant to Public Act 436 of 2012, the Local Financial Stability and Choice Act, to authorize a contract in excess of $50,000.00 not subject to competitive bidding. This request was related to the City entering into an agreement with the Karegnondi Water Authority (KWA) for provision of raw water for the City.

In considering your request, I took note of the following facts in support of Flint joining KWA. First, there is widespread support in the City for this move, including the support of the Mayor, the City Council, and the Emergency Manager. Second, this move will provide a unique opportunity for the City and County to partner on an important project, which will hopefully lead to future regional collaboration. Third, the Department of Environmental Quality is supportive of the City participating in the KWA project. Finally, your representations that this deal will lead to substantial savings for the City over the coming decades, savings that are desperately needed to help with the turnaround of the City of Flint.

It is my understanding that the Detroit Water and Sewer Department is making a final best offer to Genesee County and the City of Flint next Monday, April 15, 2013. As such, this approval will be effective at 5 pm on April 16, 2013 after receiving written notice from the City that either no such offer was presented to the county and the City or that an offer was received and was rejected in good faith based upon specified objections.

For the reasons described above and subject to the conditions set forth herein, pursuant to Section 12 (3) of PA 436 of 2012, I am authorizing you to proceed with adopting the resolution and entering into a contract with KWA.

Sincerely,

Andy Dillon
State Treasurer

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
EDWARD J. KURTZ

ELECTRONIC LETTER

April 16, 2013

Andy Dillon
State Treasurer
P. O. Box 30716
Lansing, MI 48909

Dear Treasurer Dillon:

Flint, Genesee County and KWA received an eight page letter from Detroit Water and Sewerage Department (DWSD) offering a framework for a long-term agreement with our region. Two scenarios were presented;

Scenario 1: Water from the Lake Huron Plant.

This offer was dismissed immediately because Flint would still be responsible for their share of the KWA water pipeline delivery system estimated to be $79 million. In addition Flint would not be able to operate the Flint Water Plant in which we have invested over $40 million per MDEQ mandates over the past ten years. Finally, although DWSD shows this as an option and supplied a per month cost projection for the first year, no total costs over the life of the contract were provided.

Scenario 2: "Full Service" Water Supply

This offer was also rejected. DWSD would supply water to Flint/Genesee the same way they currently are today. They would change the method of calculating our bill. The offer would provide a $1.00 per ccf reduction on our usage for the first year, providing a 30 year contract is signed.

After review of the offer, Flint/Genesee has the following concerns:

1. DWSD's offer is a framework subject to negotiations and is not a firm offer.

2. DWSD's offer is based on 40.6 mgd, the KWA plan is based on 60 mgd. Flint/Genesee last summer hit the peak of 40.6 mgd and this DWSD offer provides no room for growth. Growth would result in penalties or added cost.

3. DWSD's offer does not include a guaranteed rate for years two through thirty, nor does it provide a maximum annual increase.

4. DWSD's offer does not provide a redundant supply for GCDC.

5. DWSD's offer does not allow for the use of Flint's existing water plant.

6. The offer indicates that the total cost to Flint over the life of the contract would be $587,990,665. No indication of what annual rate of increase was used in this projection. Flint can only assume it is 4.4% based on the Tucker Young report. It is also based on 40.6 mgds. KWA's proposal is for $649,775,166 based on 60mgds (33% more). Based on 60 mgds DWSD's proposal would be $868,950,738.

On a final note, Flint/Genesee has great concern over the accuracy of the figures provided by DWSD. Attachment 1 indicates that our joint annual cost to DWSD is $50 million; actual cost is less than $25 million. Attachment 2 indicates $800 million in savings over the next 30 years. That is greater than the total cost we would pay DWSD.

Therefore, I will sign the resolution to join KWA at the close of business today.

Sincerely,

Edward J. Kurtz
Emergency Manager

City of Detroit
Water and Sewerage Department
Office of the Director

735 Randolph Street
Detroit, Michigan 48226
www.detroitmi.gov

April 17, 2013

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Via Certified Mail and Electronic Delivery

Ms. Inez M. Brown
City Clerk
City of Flint
2nd Floor, City Hall
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Ms. Brown:

Regarding: Termination of Contract for the Provision of Water Services by the City of Detroit, Water and Sewerage Department

On December 20, 1965, the City of Detroit, through its Board of Water Commissioners, (DWSD) and the City of Flint, Michigan (Flint) entered into a contract for the provision of DWSD treated water to Flint and the distribution by flint of that water to other Genesee County communities. Section 18 of that Agreement[1] provides:

18. The Board [DWSD] shall supply and sell water to the City [Flint] from the water system of the City of Detroit, and the City shall receive and purchase such water in accordance with the terms of this Agreement for an indefinite period of time but at least for a period of thirty-five (35) years from the date hereof. This Agreement may be terminated by either party after expiration of said 35-year period, upon one year's written notice served upon the other party by delivering the same to the Secretary of the Board or to the Clerk of the City as the case may be, or at any time upon mutual consent of both parties.

Please take notice that pursuant to this section, 18, of the above-referenced Agreement, DWSD is terminating this Agreement one year from today's date (April 17, 2014).

Sincerely yours,

Sue F. McCormick
Director

[1] Although the Agreement between DWSD has been subsequently amended, Section 18 remains unchanged and in full effect.

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Governor Rick Snyder
October 15, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 12-16

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Identify schools and prioritize for assessment	GCISD, GCHD, DEQ, DHHS, and Flint	Steve Busch	Completed
2.	Get DLARA plumbers organized	DEQ and DLARA	Steve Busch	DLARA inspectors are ready
3.	Complete sampling instructions	DEQ, DHHS, and EPA	Pat Cook	Incorporating comments from partners
4.	MDARD information for restaurants	MDARD, DHHS, and DEQ	Dana DeBruyn	Comments provided to MDARD
5.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	
6.	Approve Flint plan for water line	DEQ, Flint, and Genesee County	Mike Prysby	Disinfection complete; waiting for test results and completion of system flushing
7.	Lead education plan for schools for drinking water	DHHS and DEQ	Liane Shekter Smith	DEQ working with DHHS to determine who will be the lead
8.	Begin regular meetings with Flint	DEQ and Flint	George Krisztian	Meeting tentatively scheduled for 10/16/15
9.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	Tour tentatively scheduled for 10/16/15
10.	Meet with schools and DLARA – invitation only	DEQ, DLARA, and Flint schools	Karen Tommasulo	
11.	Update DEQ Web page	DEQ	Karen Tommasulo	Done 10/12/15

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
12.	Contact DHHS to see where they are with United Way regarding emergency declaration	DEQ and DHHS	George Krisztian	Completed; DHHS to notify DEQ if status changes
13.	Circulate protocol draft with EPA	DEQ and EPA	Liane Shekter Smith	
14.	Contact city about homeowner sample delivery	DEQ and Flint	George Krisztian	
15.	Communicate to MDARD and Flint that business samples should be coordinated though DEQ laboratory	DEQ, MDARD, and Flint	Liane Shekter Smith George Krisztian	Liane to call MDARD and George to call Flint
16.	Figure out number of samples from schools and child care facilities	DEQ	Liane Shekter Smith Pat Cook Steve Busch	
17.	Confirm Linda Dykema is Point of Contact for DHHS	DEQ	George Krisztian	Done
18.	Contact Karegnondi Water Authority (KWA) to find out if there are any bottlenecks we need to remove	DEQ and KWA	Mike Prysby	Further discussions with Lapeer County may need to take place
19.	Expedite 399 Plan and Phosphate Plan	DEQ and Flint	Mike Prysby	Corrosion control optimization studies in process
20.	Get update on service line index card conversion and identify where partial replacements exist	DEQ and Flint	Steve Busch	
21.	Make sure DHHS gets information so they can cross reference	DEQ and DHHS	Steve Busch	
22.	Legislative contacts	DEQ	Maggie Pallone	Conference call with Sen. Jim Ananich conducted on 10/12/15

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
23.	Legislative time line and summary	DEQ	Maggie Pallone	Provided backgrounder and time line to legislators on 10/13/15
24.	Reconnect with State Superintendent Brian Whiston	DEQ and Department of Education	Dan Wyant	Conference call conducted on 10/12/15
25.	Conduct After Action Plan	DEQ	George Krisztian	To be scheduled for 10/15/15
26.	Change Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone Liane Shekter Smith Sonya Butler	

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- The preliminary list of schools is completed, has been circulated to DHHS, and has been provided to DLARA to begin plumbing assessments. The list will remain active in case of additional schools requesting assessment/testing.

- DLARA to coordinate with Flint Schools on access for plumbing assessments. Tap coding identification from U.S. Environmental Protection Agency (EPA) guidance to be provided to DLARA.

- Preliminary comments on sampling instructions were received by voice mail from EPA. Need to discuss directly.

- DEQ comments provided to MDARD on information for restaurants, and a draft was forwarded to DHHS for their comments.

- Approve Flint plan for water line – The city of Flint and Genesee County flushed the pipeline beginning October 13; the first set of samples for total coliform analysis was collected around 2:30 a.m. Genesee County planned to collect their second sample for bacteriological analysis between 6 and 8 p.m. last night. It may take additional time to flush the Dort Reservoir before it is ready to be sampled and may set back the time that the pipeline is ready to be placed into operation (October 15 is the soonest possible). The yard piping configuration at the Flint Water Treatment Plant does allow for flexibility in operation and ability to take Dort out of service and maintain supply from Detroit; however, we have not been able to confirm that this is the way Flint plans to proceed.

- An e-mail was sent to DHHS regarding the lead education plan for schools for drinking water to determine if DEQ or DHHS will be the lead and to determine how this effort will be coordinated with broader lead education/outreach efforts.

- The city of Flint has been contacted regarding scheduling regular meetings with DEQ, and the initial meeting is tentatively scheduled for Friday, October 16.

- The city of Flint has been contacted to schedule a tour of the Flint Water Treatment Plant. It is tentatively scheduled to occur in conjunction with the initial meeting. Logistics may require postponement until the week of October 19.

- DHHS has been contacted, and they have indicated that as of 9:30 a.m. on October 13, there has been no formal request for an emergency declaration.

- John O'Brien, Genesee County Drain Commissioner's office, was contacted. The most significant bottleneck to expedite completion of the Karegnondi Water Authority (KWA) pipeline involves road restrictions currently being imposed by the Lapeer County Road Commission and include:
    - All Lapeer County secondary north-south roads are tagged "no construction traffic" for this project except for primary roads (M-19, M-53, and M-24). This significantly increases distances that construction vehicles must travel (upwards of 15 to 20 miles) to accomplish a short jog either north or south.
    - Weight restrictions in the spring will cause construction to slow or stop for one to two months. Lapeer County has indicated that St. Clair and Sanilac are not imposing the weight restrictions; however, Lapeer County will maintain their restrictions.

- DEQ staff indicated there is another potentially serious bottleneck concerning construction of the KWA pipeline. A "stop-work" order could be coming soon from the Lapeer County Road Commission.

- Samir Matta from Lockwood, Andrews & Newnam, Inc. (LAN), Flint's consultant, was contacted for an update on the corrosion control plan and submittal of the Act 399 permit application. Flint operators, with the assistance of LAN, conducted bench tests using a corrosion inhibitor (orthophosphate) and are making comparisons for use with (treated water from Detroit vs. water treated from the Flint River). LAN is currently preparing plans and a design for installation of an orthophosphate feed system. LAN expects to submit the Act 399 permit application to the DEQ by no later than the end of this week.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
October 14, 2015

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Governor Rick Snyder
October 16, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 12-16

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Identify schools and prioritize for assessment	GCISD, GCHD, DEQ, DHHS, and Flint	Steve Busch	Completed
2.	Get DLARA plumbers organized	DEQ and DLARA	Steve Busch	DLARA inspectors are ready
3.	Complete sampling instructions	DEQ, DHHS, and EPA	Pat Cook	Incorporating comments from partners
4.	MDARD information for restaurants	MDARD, DHHS, and DEQ	Dana DeBruyn	Completed; document in review process for Web site
5.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	
6.	Approve Flint plan for water line	DEQ, Flint, and Genesee County	Mike Prysby	1st sample set results were not detected; 2nd sample set results are pending; determination of flush water disposal pending by Flint
7.	Lead education plan for schools for drinking water	DHHS and DEQ	Liane Shekter Smith	DEQ working with DHHS to determine who will be the lead
8.	Begin regular meetings with Flint	DEQ and Flint	George Krisztian	Meeting confirmed and scheduled for 10/16/15

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
9.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	Tour tentatively scheduled for 10/16/15; waiting on confirmation
10.	Meet with schools and DLARA – invitation only	DEQ, DLARA, and Flint schools	Karen Tommasulo	
11.	Update DEQ Web page	DEQ	Karen Tommasulo	Done 10/12/15
12.	Contact DHHS to see where they are with United Way regarding emergency declaration	DEQ and DHHS	George Krisztian	Completed; DHHS to notify DEQ if status changes
13.	Circulate protocol draft with EPA	DEQ and EPA	Liane Shekter Smith	Initial draft completed; comments received from EPA
14.	Contact city about homeowner sample delivery	DEQ and Flint	George Krisztian	
15.	Communicate to MDARD and Flint that business samples should be coordinated though DEQ laboratory	DEQ, MDARD, and Flint	Liane Shekter Smith George Krisztian	Liane to call MDARD and George to call Flint
16.	Figure out number of samples from schools and child care facilities	DEQ	Liane Shekter Smith Pat Cook Steve Busch	
17.	Confirm Linda Dykema is Point of Contact for DHHS	DEQ	George Krisztian	Done
18.	Contact Karegnondi Water Authority (KWA) to find out if there are any bottlenecks we need to remove	DEQ and KWA	Mike Prysby	Bottlenecks identified with Lapeer County Road Commission
19.	Expedite 399 Plan and Phosphate Plan	DEQ and Flint	Mike Prysby	Corrosion control optimization studies in process

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
20.	Get update on service line index card conversion and identify where partial replacements exist	DEQ and Flint	Steve Busch	
21.	Make sure DHHS gets information so they can cross reference	DEQ and DHHS	Steve Busch	
22.	Legislative contacts	DEQ	Maggie Pallone	Supplemental appropriations bill (HB 4102) passed in the House 105-0 (10/14/15) and the Senate 37-0 (10/15/15)
23.	Legislative time line and summary	DEQ	Maggie Pallone	Provided backgrounder and time line to legislators on 10/13/15
24.	Reconnect with State Superintendent Brian Whiston	DEQ and Department of Education	Dan Wyant	Conference call conducted on 10/12/15
25.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting to be scheduled for week of 10/19/15
26.	Change Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone Liane Shekter Smith Sonya Butler	

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- Supplemental appropriations bill (House Bill 4102) passed in the House 105-0 on October 14 and in the Senate 37-0 on October 15.

- E-mail sent to DLARA with draft sampling ID protocol.

- E-mail drafted with request for schools to prepare documents/information ahead of DLARA visit and on-site assessment. Waiting for comments.

- MDARD incorporated input from DEQ for the guidance document to restaurants. The final version is being reviewed for inclusion on the Web site.

- The pipeline was flushed, and the 1st round of samples for bacteriological analysis collected yesterday (4:00 a.m. at mid-point and 7:30 a.m. at CS #3 – Flint Water Treatment Plant) were non-detect for total coliform.

- The 2nd round of samples were collected yesterday evening at mid-point (Genesee County) and late last night at CS #3 (Flint). Results will be available later this evening and read first thing tomorrow morning. If the 2nd set of samples is all clear, the pipeline will be ready to be placed into service (from a technical standpoint). The pipeline, however, will not be placed into service until Flint, Genesee County, and Detroit agree on and establish a service contract.

- The Dort Reservoir will not be placed into service (this facility can be bypassed) until Flint determines what to do with the 6 million gallons of water (chlorinated at approximately 100 parts per million). What they thought was a connection to the sanitary sewer was discovered yesterday to be a connection to the storm sewer.

- The first weekly meeting with the city of Flint has been scheduled for October 16. Attendees will include: Natasha Henderson (city of Flint), George Krisztian (DEQ), Shelly Edgerton (DLARA), Linda Dykema (DHHS), and Dr. Eden Wells (DHHS).

- A tour of the Flint Water Treatment Plant has been requested and tentatively scheduled for October 16. We are waiting for confirmation from city of Flint officials. Due to potential scheduling conflicts, this may be rescheduled for the week of October 19.

- The initial draft of the sampling protocol has been submitted to EPA, and comments have been received.

- Potential bottlenecks have been identified regarding load restrictions. Further discussions with the Lapeer County Road Commission will be necessary to identify potential accommodations.

Additional action:

Outreach was made to the Genesee County Health Department (GCHD) to ask for assistance with the sampling of Flint schools. The GCHD has expressed some reservations, and further communication will take place to strengthen the partnership.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
October 15, 2015

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Governor Rick Snyder
October 21, 2015
Daily Briefing

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RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

Contacts: Sara Wurfel or Dave Murray 517-335-6397	**FOR IMMEDIATE RELEASE** Wednesday, Oct. 21, 2015

Gov. Rick Snyder announces formation of Flint Water After Action Report Commission

Experts will provide ongoing monitoring of city water system

LANSING, Mich. – Gov. Rick Snyder today announced a new task force to review the state's actions regarding water usage and testing in Flint. The commission will conduct a thorough review and lay out recommendations on future guidelines for water testing. It will also monitor the transition of Flint's city water system back to the Great Lakes Water Authority, and its eventual transition to the Karegnondi Water Authority pipeline.

The commission will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, and Eric Rothstein, of the Galardi Rothstein Group.

"As stated previously, transitioning back to the Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on technical issues will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the citizens of Flint."

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate Majority Leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

Chris Kolb is president of the Michigan Environmental Council, a statewide coalition of 70 environmental, public health and faith-based nonprofit groups. Before joining the MEC, Kolb represented Ann Arbor in the state House for six years and served eight years on the Ann Arbor City Council. He has been president of the MEC for eight years.

Matthew Davis, M.D., M.A.P.P., is Professor of Pediatrics and Internal Medicine at the University of Michigan Health System and Professor of Public Policy at the Gerald R. Ford School at the University of Michigan, having joined the faculty in 2000. He is the founding Director of the C.S. Mott Children's Hospital National Poll on Children's Health and the National Voices Project. Dr. Davis also previously served as the Chief Medical Executive of the Michigan Department of Community Health/Department of Health and Human Services.

Eric Rothstein is a national water issues consultant and principal at the Galardi Rothstein Group. He served as an independent advisor on the creation of the Great Lakes Water Authority. Rothstein also has served as Jefferson County, Alabama's rate consultant and municipal advisor for litigation related to the county's bankruptcy and issuance of $1.7 billion in sewer warrants and led strategic financial planning for the City of Atlanta's Department of Watershed Management. He has more than 30 years of experience in water, wastewater and stormwater utility finance and rate-making assessments.

As Gov. Snyder previously stated, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control.

To best protect public health, state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality is continuing to provide free water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

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City of Flint Water
Action Steps for Week of October 19-23

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	
2.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	To be scheduled for week of 10/19/15; waiting on confirmation from Flint
3.	Figure out number of samples from schools and child care facilities	DEQ	Jim Sygo Pat Cook Steve Busch	1,300 samples (13 schools and 100 samples per school)
4.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting to be scheduled for week of 10/19/15
5.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
6.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	
7.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
8.	$1 million for DEQ Laboratory billing code	DEQ	Maggie Pallone George Krisztian	
9.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
10.	Develop letter to schools	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	
11.	Finalize sampling protocol	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Revised draft sampling protocol shared with DLARA, DHHS, EPA, and Genesee County Health Department on 10/19/15 for comment
12.	Confirm school sampling logistics	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	
13.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	
14.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
15.	ODWMA staff observe a DLARA plumbing assessment	DEQ and DLARA	Steve Busch Pat Cook Mike Prysby	Scheduled for 10/21/15
16.	Develop sample form and chain of custody document	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
17.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Initial comments by EPA received on 10/19/15; further discussions to take place
18.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	
19.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
20.	Provide city of Flint updated monitoring schedule based on Detroit Water and Sewerage Department (DWSD)/Great Lakes Water Authority (GLWA) service	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
21.	Contact city of Flint and Genesee County Health Department daily for DWSD connection status updates	DEQ, Flint, and Genesee County Health Department	Jim Sygo Steve Busch Pat Cook Mike Prysby	Switch to DWSD completed on 10/16/15; city of Flint will let DEQ know if they run into any unforeseen issues
22.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	
23.	Verify city of Flint distribution operations under DWSD/GLWA service	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
24.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
25.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
26.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- On October 16 DEQ staff calculated an estimate for the number of samples that we expect to take per school. During our October 16 meeting with Flint Community Schools representatives, they supported our assumptions. Based on this, we estimate that if we collect 3 samples at each drinking water/cooking tap at each school, we can expect to collect approximately 100 samples per school (13 schools = 1,300 samples). This number is only for the first 13 locations that were identified in the preliminary investigation. A more comprehensive determination of the total number of facilities will be made after the initial pilot of 3 schools is complete.

- Draft language changes for Part 54 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, have been submitted to Maggie Pallone for review before final submission.

- The revised draft sampling protocol was shared with DLARA, DHHS, EPA, and Genesee County Health Department on October 19 for comment.

- DEQ's Office of Drinking Water and Municipal Assistance staff is scheduled to observe DLARA staff conducting a plumbing assessment on October 21.

- Initial comments by EPA regarding Flint's proposed corrosion control treatment plan were received on October 19. EPA's comments in their entirety are included as an attachment. DEQ staff has been instructed to contact EPA on October 20 to get clarification of some of the comments.

- On October 19 George Krisztian contacted Howard Croft, Public Works Director, city of Flint, to find out how the transition to Detroit Water and Sewerage Department (DWSD) was going. Mr. Croft indicated that Flint switched over in a controlled manner so as to minimize disruptions in the infrastructure. He said that the transition went very smoothly and that Flint is on DWSD water 100 percent. Mr. Croft also indicated that they would be doing testing throughout the distribution system and they would be focusing on hardness levels to determine the extent to which the DWSD water had made it through the system. He anticipated that it would be a full week before there was a complete turnover of the source water.

Attachment

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
October 20, 2015

From: Lytle, Darren [mailto:Lytle.Darren@epa.gov]
Sent: Monday, October 19, 2015 12:05 PM
To: Prysby, Mike (DEQ)
Cc: Schock, Michael; Kempic, Jeffrey; Busch, Stephen (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

Mike,

Thank-you for giving us the opportunity to review the city of Flint's corrosion control plan.

We believe it is necessary that Flint boosts orthophosphate dosage. Given that the distribution system has not received orthophosphate in over a year, we expect that orthophosphate will need to be boosted to 1) meet the demand of the distribution system, 2) reach the service lines and other lead-containing components in premise plumbing, and 3) accelerate lead reduction at the consumer's taps. Orthophosphate should preferably be added in the same form as the Detroit source which is phosphoric acid from our understanding. This is the proposed case here, however, a simple test should be performed to make sure that the pH is not impacted in a significant way at the desired target dose.

We have not been able to obtain comprehensive water quality data for the finished water characteristics of the Detroit water that will be fed to Flint, to assess ranges of major chemical characteristic fluctuations. However, based upon the email trail, Detroit water entering the Flint system appears to only contain around 0.4 PO4/L. This concentration range is entirely too low compared to that needed in studies presented and published in the last 20+ years that have focused on lead released directly from lead pipes, and the solubility of the most likely lead orthophosphate pipes scales. We also strongly feel that targeted dose of 0.8 mg PO4/L is also too low, for the very same reason. We would be glad to share with you numerous standard corrosion control and treatment reference works, best practices guides and published results from US and international lead corrosion control field and pilot studies. Secondly, the basis for that target (other communities using Lake Huron source use the same dose) is not scientifically derived nor does it consider water quality and the current state of Flint's distribution system. We have reviewed the original Detroit corrosion study and have seen some of the LCR monitoring data, and besides the fact that it did not directly pertain to this water source, few dosages were tested in the cited 1994 pipe loop study, and the higher dosage than the one implemented in the field currently was more effective. Based on the limited amount of data on the quality of Detroit water, what we know about the history of Detroit corrosion control, we think an orthophosphate residual of 3 to 4 mg PO4/L should be the minimum starting test target residual for pipe passivation. It is likely that, at least initially a higher dosage will be necessary to reach the far ends of the distribution system and sufficiently reduce lead solubility and release from all lead sources. To allow flexibility, we feel the design of the chemical feed and storage systems should be able to consistently deliver a maximum dose of 5 to 6 mg PO4/L, if substantial orthophosphate loss is observed, if the starting dose is set for the desired residual level of 3 to 4 mg/L as PO4. We suggest that jar tests be performed in advance of orthophosphate addition to Detroit water to evaluate the impact of orthophosphate dose on turbidity that could result from interactions between orthophosphate and background Detroit water quality parameters (e.g., aluminum, calcium, etc.).

We want to stress that immediately shifting to Detroit water and adding orthophosphate will not necessarily translate to immediate improvements. Furthermore, this is a change, albeit a return to past conditions. Nonetheless, a period of system upset should be anticipated. The need for a communication strategy and a distribution system plan are critical.

Lastly, we see no mention of a water quality monitoring program. Two programs need to be put in place immediately (before return to Detroit water) to 1) identify lead sources, 2) assess treatment effectiveness against lead release from all of the simultaneously operating mechanisms (solubility, particulate release, galvanic corrosion), and 3) assess orthophosphate levels and stability of water quality in the distribution system.

There are multiple sources of lead in the Flint distribution system to the consumers' taps, such as: pipes; leaded brass; leaded solder; accumulations on old galvanized steel pipes; possibly accumulated on copper or some plastic pipes. It is critical that the fate of orthophosphate in the distribution system is understood, and how effective it is against each type of lead source, so dosing adjustment can be properly made. For this purpose, we recommend that a number of residences throughout Flint that meet the following plumbing criteria, be identified for an assessment of the contribution lead from the different potential service line and interior plumbing sources, through detailed mapping of plumbing materials, lengths, sizes, and location and type of inline devices and faucets using profile sampling. For confidence in interpretation, probably at least 5 sites from each of the configurations will be necessary. The configurations we would estimate to be most important (but should be changed or added to if local construction practice indicates it's necessary): Lead service line, galvanized steel interior plumbing; lead service line, copper with leaded solder joints; lead service line, plastic interior plumbing. It is also possible that interior plumbing may differ from the material used for the customer-side service line segment. We would be glad to discuss the specifics of this sampling effort.
For the purpose of assessing stability of water quality in the distribution system and to inform on orthophosphate residual adjustment, we suggest that 8 to 10 locations in the distribution system be selected to measure pH, alkalinity, orthophosphate, turbidity and iron on a weekly basis. These could be collected from TCR sampling locations, or other readily-accessible buildings, should be located at a distribution of locations in the distribution system and should be collected after a flush sufficiently long to assure that "fresh" distribution system water is being measured. Research has shown that over time, orthophosphate can reduce disinfectant demand associated with corroding metallic distribution system materials. These measurements need to be performed in the field and can simply be done with a portable HACH test kit or spectrophotometer.

A lead sampling plan needs to be in place to access the effectiveness of water change and treatment boost. LCR monitoring sites with confirmed lead service lines can be in the sampling pool. Sampling should consist of a 1 liter first draw sample (LCR sample without 5 minute pre-flush), followed by an additional flushed sample or two depending on profile sample results which is intended to capture major lead source(s). The specific details of this effort need to be worked out by the technical committee as soon as possible. We would gladly work with Flint on establishing a water sampling program to identity and verify lead service line sites. The plan and initial sampling effort should be performed before the switch so that one baseline sample set is collected.

Lastly, our strength does not fall under full-scale pump and chemical feed delivery systems. We would only say that the systems need to be scaled-up in size to accommodate our suggested dosing needs. Also, there is the some discussion about diverting water to the Dort reservoir and an associated orthophosphate feed system. We are not familiar with the reservoir but are wondering if it is an open reservoir?

Of course this is a lot of information to share and we would gladly be available to discuss the technical and scientific basis for our suggestions.
Let us know if you have any questions and thanks again,

Darren and Mike

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Governor Rick Snyder
October 23, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 19-23

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	This Action Step has been incorporated as part of the After Action Plan (Action Step #4)
2.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	Scheduled for 10/23/15 at 11:30 a.m.
3.	Figure out number of samples from schools and child care facilities	DEQ	Jim Sygo Pat Cook Steve Busch	1,300 samples (13 schools and 100 samples per school)
4.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting scheduled for 10/22/15
5.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
6.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
7.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
8.	$1 million for DEQ Laboratory billing code	DEQ	Maggie Pallone George Krisztian	Billing codes created on 10/21/15
9.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
10.	Develop letter to schools	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	This Action Step has been incorporated into Action Step #13
11.	Finalize sampling protocol	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Comments received from EPA's Flint Safe Drinking Water Task Force (Task Force); DEQ staff continuing to finalize protocol
12.	Confirm school sampling logistics	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Logistics have been finalized for the initial sampling scheduled for 10/24/15
13.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A meeting with the 10 remaining schools is tentatively scheduled for the week of 10/26/15
14.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting
15.	ODWMA staff observe a DLARA plumbing assessment	DEQ and DLARA	Steve Busch Pat Cook Mike Prysby	Initial plumbing assessment is scheduled for 10/23/15; sampling to occur on 10/24/15
16.	Develop sample form and chain of custody document	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ Laboratory has created a fillable PDF form for use in the school sampling protocol

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
17.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Conference call with EPA held on 10/20/15 to discuss comments
18.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Construction permit is in process
19.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ staff is reviewing and seeking clarification on comments received from EPA's Task Force
20.	Provide city of Flint updated monitoring schedule based on Detroit Water and Sewerage Department (DWSD)/Great Lakes Water Authority (GLWA) service	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
21.	Contact city of Flint and Genesee County Health Department daily for DWSD connection status updates	DEQ, Flint, and Genesee County Health Department	Jim Sygo Steve Busch Pat Cook Mike Prysby	Switch to DWSD completed on 10/16/15; city of Flint will let DEQ know if they run into any unforeseen issues
22.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Monitoring letter expected to be mailed on 10/22/15
23.	Verify city of Flint distribution operations under DWSD/GLWA service	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
24.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
25.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
26.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- The initial meeting for the internal After Action Plan is scheduled for October 22. The purpose of the meeting is to define the scope of the internal review, create a detailed time line, connect all communications together to determine where communications could have been improved, and create a list of lessons learned and action steps moving forward.

- Madhu Anderson has provided information for the creation of an external After Action Review Panel. The Panel members have been selected, and a press release was issued by the Governor's office on October 21.

- The DEQ Laboratory, working in conjunction with MDOT's Accounting Services Division, has created the necessary billing codes to allow payment for the lead and copper samples from the city of Flint to be processed.

- The EPA's Flint Safe Drinking Water Task Force (Task Force) has provided comments to staff in the Office of Drinking Water and Municipal Assistance (ODWMA) on the sampling protocol. These comments are being reviewed, and ODWMA staff is continuing to finalize the protocol.

- The logistics for the initial plumbing evaluation and subsequent water sampling have been finalized among staff from DEQ, DLARA, and DHHS. The plumbing inspection is scheduled for Friday, October 23, and the water samples will be taken on Saturday, October 24.

- DEQ staff is responding to comments on the corrosion control proposal made by the EPA's Task Force. DEQ staff is following up on questions raised during the October 20 conference call.

- A monitoring schedule letter is expected to be mailed on October 22. The monitoring schedule addresses the change back to a customer supply of the Great Lakes Water Authority. A final copy of the letter will be attached to tomorrow's update.

Additional Actions:

- At the request of Representative Sheldon Neeley, George Krisztian contacted Carlita Earl, Principal of the Eagle's Nest Academy. Ms. Earl has formally requested that Eagle's Nest Academy receive a plumbing evaluation and water sampling as outlined in the newly-developed school assessment protocol. Ms. Earl was informed that she would be added to the list of schools being evaluated and that the original 13 Flint Community Schools buildings would be

evaluated first and then the DEQ/DLARA/DHHS would expand the evaluation process to charter schools, parochial schools, and other childcare facilities. Ms. Earl was informed that since the Eagle's Nest Academy serves children in grades K-4 that they would be placed at the top of the list once the evaluations of the original 13 buildings are complete.

- Director Dan Wyant, Chief Deputy Director Jim Sygo, and George Krisztian met with a group of pastors and citizens who came to Constitution Hall to voice their concerns regarding the water in Flint. The discussion lasted for approximately one hour, and the topics included a history of events, questions regarding how decisions were made, and the plan moving forward. The group indicated that they had read a great deal in the media and were interested in finding out what DEQ's perspective of the situation was. The questions were tough, but the conversation was very respectful. The group was informed that an independent group external to the DEQ would be conducting an After Action Review, and this information seemed to be well-received.

- Shelly Edgerton of DLARA spoke to Eric Swanson of DTMB, who is going to call Howard Croft, Public Works Director, city of Flint, about the GIS program that the city of Flint is trying to run. Eric will follow up with Shelly after the conversation. In addition, DLARA will be meeting again with the city of Flint.

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October 22, 2015

Governor Rick Snyder
October 28, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 26-30

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting held 10/22/15
2.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
3.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
4.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
5.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	
6.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A meeting with the 10 remaining schools is tentatively scheduled for the week of 10/26/15
7.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Meeting scheduled for 10/27/15
8.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Summary of Flint's corrosion control plan submitted to EPA

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
9.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Remaining items due are anticipated to be provided on 10/27/15
10.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Comments by DEQ to city of Flint have been provided
11.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues; check weekly for status update	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Issues regarding soil erosion controls during construction are being addressed
12.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Nearly 11,000 records received and waiting for review by DEQ staff
13.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
14.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting
15.	Create a generic school sampling guidance document for statewide distribution; target audience: schools served by municipal water	DEQ and DLARA	Jim Sygo Steve Busch Richard Benzie	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
16.	Confirm plumbing assessment and sampling is scheduled for Brownell K-2 STEM Academy and Eisenhower Elementary School	DEQ and DLARA	Jim Sygo Steve Busch Mike Prysby	Tentatively scheduled for 10/30/15

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- A meeting has been confirmed for October 27 with DHHS to discuss all lead education material for schools.

- DEQ staff discussed with the city of Flint's consultant, Lockwood, Andrews & Newnam, Inc., the remaining items that are needed for issuance of Michigan's Safe Drinking Water Act (Act 399) construction permit. Staff anticipates receiving these items on October 27.

- DEQ staff obtained approximately 10,895 records from the city of Flint's GIS system regarding service line index cards and extracted them into a table format for additional data review. Data review has been initiated by DEQ's Lansing District Office staff.

- DLARA and DEQ staff tentatively plans to conduct plumbing assessments at Brownell K-2 STEM Academy and Eisenhower Elementary School on October 30. DLARA staff will contact the Flint Community Schools' facility administrator to confirm the date and approximate times.

Additional Actions:

- All of the 124 samples that were taken at Freeman Elementary School on Saturday, October 24, were analyzed by the DEQ Laboratory on Monday, October 26. The data is being compiled into a spreadsheet to allow an evaluation of the various sampling points. Initial indications are that there will need to be some replacement of plumbing fixtures, but issues do not seem to exist deeper into the plumbing infrastructure. Further sequential testing will be conducted at select points to verify that water is being drawn from the main.

- DEQ staff met to discuss lessons learned from the sampling event at Freeman Elementary School. A number of observations were made with respect to how to streamline the process. The group agreed to incorporate several of the observations into the sampling protocol. The protocol is being updated to reflect these changes.

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October 27, 2015

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Governor Rick Snyder
October 27, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 19-23

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	This Action Step has been incorporated as part of the After Action Plan (Action Step #4)
2.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	Scheduled for 10/23/15 at 11:30 a.m.
3.	Figure out number of samples from schools and child care facilities	DEQ	Jim Sygo Pat Cook Steve Busch	1,300 samples (13 schools and 100 samples per school)
4.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting held 10/22/15
5.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
6.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
7.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
8.	$1 million for DEQ Laboratory billing code	DEQ	Maggie Pallone George Krisztian	Billing codes created on 10/21/15
9.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
10.	Develop letter to schools	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	This Action Step has been incorporated into Action Step #13
11.	Finalize sampling protocol	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Sampling protocol was revised to include comments by EPA
12.	Confirm school sampling logistics	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Logistics have been finalized for the initial sampling scheduled for 10/24/15
13.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A meeting with the 10 remaining schools is tentatively scheduled for the week of 10/26/15
14.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting
15.	ODWMA staff observe a DLARA plumbing assessment	DEQ and DLARA	Steve Busch Pat Cook Mike Prysby	DEQ staff observed the DLARA plumbing assessment of Freeman Elementary School on 10/23/15
16.	Develop sample form and chain of custody document	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ Laboratory has created a fillable PDF form for use in the school sampling protocol

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
17.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Summary of Flint's corrosion control plan submitted to EPA
18.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Additional discussions are in progress with city of Flint
19.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Comments by DEQ to city of Flint have been provided
20.	Provide city of Flint updated monitoring schedule based on Detroit Water and Sewerage Department (DWSD)/Great Lakes Water Authority (GLWA) service	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Updated monitoring schedule has been completed and signed
21.	Contact city of Flint and Genesee County Health Department daily for DWSD connection status updates	DEQ, Flint, and Genesee County Health Department	Jim Sygo Steve Busch Pat Cook Mike Prysby	Switch to DWSD completed on 10/16/15; city of Flint will let DEQ know if they run into any unforeseen issues
22.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Issues regarding soil erosion controls during construction are being addressed
23.	Verify city of Flint distribution operations under DWSD/GLWA service	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	The switch back to Detroit water has been smooth so far

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
24.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
25.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
26.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- The sampling protocol was revised to address comments received on October 22 from EPA's Flint Safe Drinking Water Task Force.

- Staff assisted DLARA in conducting a plumbing assessment at Freeman Elementary School. Actions were taken to prepare for sampling to be conducted on Saturday, October 24.

- The information requested by the DEQ was not received on October 23 from Flint's consultant, Lockwood, Andrews & Newnam, Inc. (LAN); thus, the construction permit for phosphate equipment was not issued. DEQ staff discussed with Flint Water Treatment Plant operator Brent Wright and Utilities Superintendent Michael Glascow. Brent confirmed that he needs to provide some of the information regarding the phosphate product to LAN.

- DEQ staff discussed with Michael Glascow and Brent Wright the need for quarterly test runs and monthly operation reporting details while the Flint Water Treatment Plant is in standby mode. Also included the need to report phosphate dosages and phosphate residuals (plant tap and distribution) in the monthly operation report.

- John O'Brien (Genesee County Drain Commissioner's office) contacted DEQ staff in response to our October 22 e-mail. The Lapeer County Road Commission (LCRC) has placed a stop work order on Contract S-4005; however, the Genesee County Drain Commissioner's office contends that the LCRC has no authority to issue a stop work order; thus, work is continuing. DEQ stressed the importance to John of the need to keep the project moving forward and to confirm that the contractor is following proper soil erosion measures and other local guidelines that may apply.

- Based on a discussion with Michael Glascow and Brent Wright, there have not been major distribution system issues or upsets since the switch back to Detroit Water and Sewerage Department. Utility operators were flushing and winterizing hydrants this week and flushing from the Flint Water Treatment Plant to the outside reaches of the distribution system. Phosphate residuals are also being measured twice per week at Flint's bacteria monitoring sites.

Additional Actions:

- Representatives from DEQ, DLARA, and DHHS met on October 23 with Mayor Dayne Walling and Howard Croft from the city of Flint for the weekly update. Each group gave an overview of actions that were taken over the course of the week. The DEQ discussed sample results from homeowners since the offer to

provide free lead and copper testing was made. The DEQ also discussed the school sampling protocol that was developed and would be used on Saturday, October 24, at Freeman Elementary School. DLARA discussed the plumbing assessment of Freeman Elementary School that was being conducted on Friday, October 23. DHHS gave an update on the prioritization schema for blood lead screening that was being conducted for Flint residents, with the highest priority going to individuals with the highest risk, including young children and infants.

- After the weekly coordination meeting, the city of Flint gave a tour of the Flint Water Treatment Plant to coordination committee members from the DEQ, DLARA, and DHHS. The tour provided a complete picture of the treatment process for both sources of water that could potentially be used, including water from the Flint River and treated water coming from Detroit. There was also discussion on how water from the Karegnondi Water Authority would be distributed, along with discussion of the supplemental addition of corrosion control agents.

- On Saturday, October 24, representatives of DEQ and DLARA conducted the first sampling event of Flint schools at Freeman Elementary School. Media from several news agencies were present to cover the initial sampling event and conducted interviews with Karen Tommasulo and footage was taken of the sampling process. The sampling team consisted of seven members, and it took a little over three hours to conduct the entire sampling event. There was a small group of protesters outside of the school who stayed there for approximately an hour and a half, after which they peacefully disbursed.

  After the sampling event, the samples were driven to the DEQ Laboratory and logged into the computer system. The Laboratory's Inorganics Unit Supervisor was contacted and made aware of the status of the samples. The samples were then prepped on Sunday, October 25, and are scheduled for analysis on Monday, October 26.

  Links for media coverage of the sampling event are below:

  http://www.abc12.com/home/headlines/State-begins-extensive-testing-of-water-plumbing-inside-Flint-Community-Schools-336669641.html?device=phone&c=y

  http://nbc25news.com/news/local/mdeq-tests-lead-levels-at-flint-schools

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October 26, 2015

Flint Water Public Health Response: MDHHS Action Plan Daily Summary

10-22-15

ACTION PLAN: FILTER/FILTER REPLACEMENTS	STATUS
Filter Distribution • Residents may continue to obtain filters from GCCARD (both sites 9-4PM) and MDHHS clients can continue to obtain filters at the two MDHHS office locations or the GCCARD sites. • GCCARD working with UAW plumbers to provide home installs for vulnerable population including homebound, seniors, and dialysis. (Providing $20,000 in kind support). 147 installs completed as of 10-21-2015.	No action indicated, informational only.
Filter Replacement Distribution • The procedure is in place for replacement cartridge distribution including an abbreviated application for residents to apply for and obtain cartridge replacement. Cartridge replacement will occur at same locations as filter sites.	**ACTION:** It is understood that MDHHS has obtained all available replacement cartridges from nationwide supply. Kris S will check with Chris Sanches (DHHS) to determine/verify availability of additional cartridges for purchase if needed. **Estimated completion date: 10-23-15**
NEW ISSUE: Public Education Proper Filter Use • When used improperly, the filters will exceed their capacity limit in a much shorter time frame thereby increasing need for filter replacement much sooner than expected.	**ACTION:** Jen Eisner will work with Hilda McShane to develop NEW public education material about proper use of cartridge AND how to obtain filter replacement cartridges, targeted for release week of October 26 during lead awareness week. This should be included with all filter replacement cartridges. **Estimated Completion date: 10-26-15**
ACTION PLAN: LEAD TESTING IN CHILDREN/HIGH RISK GROUPS	**STATUS**
Testing Protocol: Draft protocol has been completed, undergoing final review. Protocol calls for testing: Priority groups- • Confirmatory venous testing for children who had venous testing (115 children) • Children in day care, Head Start • children attending 3 schools (Freeman, Eisenhower, Brownell) • Children residing in high risk zip codes (03, 04) • All other students Children/parents usual source of primary care. If no usual source of primary care, can obtain testing at GCHD. Mass	**ACTION:** Finalize testing protocol by 10-23-15 (Wells/Peeler) **ACTION:** Share all materials with Medicaid (Wells/Peeler) **ACTION:** Contact MDE regarding sharing student list (Hertel) **ACTION:** Wells/Valacak will schedule a meeting with the Flint Schools superintendent to discuss parent education/ lead testing (Friday, October 23) **ACTION:** The list of kids with elevated blood levels will be cross referenced to see if their household has a filter. (Peeler/Scott)

testing in school setting NOT recommended. Would like to obtain the student list from the three schools and cross reference with our lead testing data to determine children tested/not tested	
Parent education materials have been completed. GCHD has ability to work with their Head Start and Early head start programs to disseminate parent information	**ACTION:** Call with Flint school superintendent, GCHD, and MDHHS scheduled 10-24-15 to discuss dissemination process. Will also contact Kyle Guerrant(MDE). (Hertel) **Estimated Completion date: 10-23-15**
Provider educational material completed. Communication to providers will occur through GCHD and MDHHS networks (GCMS, GCARD, hospitals, etc)	**ACTION:** Need to coordinate with GCHD. **Estimated completion date:** TBD (Wells/Peeler)
Community public education and testing event: Working with GCHD to coordinate public testing and awareness events with health care providers and health plans in the Flint area.	**ACTION:** McLaren Health Plan in conjunction with GCHD hosting a public testing and awareness event on November 5 at the Burton GCHD site. McLaren will have providers on site to perform testing for their members; GCHD onsite to perform testing for all others. Event will also include Medicaid application assistance. **ACTION:** Tony Larocco (GCHD) has contacted Molina, Molina Health interested in sponsoring a similar community testing and awareness event. **Estimated completion date:** confirm Molina date by 10-30-15 (LaRocco-GCHD)
ACTION PLAN: ENVIRONMENTAL INVESTIGATION	
Wes Priem (MDHSS) developed a data collection document that will be in the testing protocol. The document collects additional information that will help expedite the environmental investigation process.	No action indicated, informational only
ACTION PLAN: FUNDING	
10-21-15 Funding for case management nurses will be disseminated to GCHD through new project: *Flint Water*, for $425,000 through the Comprehensive Contract Egrams system, to fund the: Follow-up of Children Reported with Elevated Lead Levels: Case Management Services. GCHD advised to secure approvals for use of these funds and begin procedures to place staff in appropriate positions to conduct the work.	No action indicated, informational only

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Governor Rick Snyder
November 10, 2015
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City of Flint Water
Action Steps for Week of November 2-6

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Conduct After Action Plan	DEQ	George Krisztian	Meeting held on 10/29/15 to discuss time line
2.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
3.	Assist After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
4.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	Negotiations underway to contract with the Genesee County Health Department
5.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	
6.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A summary report for Freeman Elementary School has been drafted
7.	Contact DHHS regarding lead education material for schools; provide information as requested by DHHS	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Meeting held on 10/27/15; action items created
8.	Follow up with city of Flint regarding corrosion control treatment and their plans to address requirements and options provided for in 10/30/15 DEQ letter	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
9.	E-mail city of Flint regarding timing to install corrosion control now that the construction permit has been issued	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	E-mailed city of Flint on 11/4/15; 11/5/15 response indicated equipment to be ordered and plan to start installing feed piping on 11/9/15
10.	Review Monthly Operation Reports (MORs) for Standby Operation of Flint Water Treatment Plant with city of Flint; draft letter to city of Flint documenting Standby Operation requirements	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Letter is drafted and will be sent to city of Flint the week of 11/9/15; MOR review with city of Flint will be conducted during next routine site visit
11.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues; check weekly for status update	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Issues regarding soil erosion controls during construction are being addressed
12.	Continue evaluating city of Flint Service Line Record status and comparison to sampling pool	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Letter requesting additional information/documentation to be provided to city of Flint on 11/9/15
13.	Provide DHHS with any available cross-reference information regarding lead service lines and plumbing materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
14.	Develop childcare facility guidance or review DHHS-related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Meeting held on 10/27/15; DHHS to provide materials
15.	Develop draft sampling protocol for residential exposure assessment for DHHS	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook	Draft document under development; discussed preliminary plan with DHHS

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
			Mike Prysby	
16.	Make progress on drafting a generic school sampling guidance document for statewide distribution; target audience: schools served by municipal water	DEQ and LARA	Jim Sygo Steve Busch Richard Benzie	Draft document under development to make it an easy-to-read and follow guidance document
17.	Attend 11/5/15 meeting arranged by DHHS regarding residential elevated blood lead investigations and water testing	DEQ and DHHS	Jim Sygo George Krisztian Steve Busch	Done

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Key Actions:

- The city of Flint has received the necessary building permits to move forward with plans for the supplemental addition of phosphate to water that is coming from the Detroit Water and Sewerage Department. The purpose of the supplemental addition of phosphate is to reestablish the protective coating throughout the distribution system. This protective coating slows the leaching process of lead from service lines, household fixtures, and solder used for connecting copper pipes. The city of Flint has made the purchase of the necessary equipment a high priority and hopes to have the pumps installed and running within the next month.

- The report for Freeman Elementary School that documents and explains the results of the plumbing evaluation conducted by the DEQ and DLARA has been completed and will be distributed on November 9. The report demonstrates that the issues in the school are fixture-specific and that there was no evidence found to suggest that significant lead contamination is occurring deep within the plumbing system. The report will recommend replacement of fixtures that were found to have lead levels exceeding 15 parts per billion. Once a press release has been issued, the report will be posted to the Flint water Web site: www.mi.gov/flintwater.

- Data for residents of the city of Flint have been compiled into spreadsheets that sort the data by ZIP Code and also by concentration. The data to date indicate that the issue of lead contamination is not system-wide but is site specific. Over three quarters of the samples showed lead levels of 5 parts per billion or less and over 91 percent of the samples were at levels of 15 parts per billion or less. These spreadsheets will also be posted to the Flint water Web site.

Positions:

- With respect to the school data and the samples submitted by residents through the free lead testing program, the issue of lead contamination in the water appears to be site specific. In both cases, the water within the distribution system does not appear to be the issue. The contamination appears to be coming from fixtures, solder used to connect copper, and from lead service lines. While the initial results are encouraging and show that the large majority of homes do not have an issue, it is important that residents do not make assumptions. The only way to know if water contains lead is to have it tested.

Concerns:

- The action level of 15 parts per billion that is used in the lead and copper rule (LCR) was set up to determine if a supply was utilizing optimized corrosion controls. It was not meant to serve as a health-based exposure model. The

DEQ will be releasing data on Freeman Elementary School and residential data on November 9. The DHHS is currently working on evaluating blood lead levels on children in the city of Flint. It is important that when the DHHS is ready to present their data that the message they present does not inadvertently contradict information provided by the DEQ. While it is recognized that the ultimate goal is to have no detectable amount of lead in the water, this goal may not be practical as the DEQ utilizes the criteria as specified by the U.S. Environmental Protection Agency (EPA).

- The State of Michigan is being criticized as a result of recent information coming to light that a significant number of samples were not collected from proper sampling locations as part of the sampling program in the city of Flint to demonstrate compliance with the LCR under Michigan's Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). Recently the city of Flint began to electronically convert customer service line information. This effort, along with statements by some of the city of Flint's certified operators, directly conflicts with information certified by the city of Flint in documents referred to as LCR compliance monitoring certification reports.

- Correspondence is drafted and will be sent to the city of Flint requesting that they provide appropriate documentation to demonstrate that the sampling locations selected and certified by the city of Flint comply with Act 399. In the absence of appropriate justification/documentation, the city of Flint may be subject to enforcement for violation of Act 399.

Significant Event:

- On November 3 the EPA issued a memorandum to address "certain concerns raised about the application of the [federal] 1991 Lead and Copper Rule, specifically the requirements pertaining to maintenance of optimal corrosion control treatment, in situations in which a large water system ceases to purchase treated water and switches to a new drinking water source." This EPA memorandum further states: "This type of situation rarely arises and the language of the LCR does not specifically discuss such circumstances. After reviewing the rule with our Office of General Counsel, it appears that there are differing possible interpretations of the LCR with respect to how the rule's optimal corrosion control treatment procedures apply to this situation…." This EPA memorandum clarifies the requirements should a situation like Flint occur again in the future. However, it clearly recognizes that the options chosen by Michigan were one interpretation or option of the LCR.

Changes from Previous Report:

- Staff e-mailed Michael Glasgow and Brent Wright of the city of Flint on November 4 to request a time line and a request to notify the DEQ when the phosphate equipment is installed. Mr. Wright responded on November 5 noting

that the city of Flint just received the Act 399 permit in the mail on November 5. Equipment is to be ordered by November 6, and the Flint Water Treatment Plant operators plan to start installing the feed piping on November 9.

- A letter detailing standby operation requirements is currently being prepared by the DEQ and will be sent to the city of Flint during the week of November 9. A review of the standby operation monthly operation reports with the city of Flint will be conducted during the next routine site visit at the Flint Water Treatment Plant.

- A letter has been prepared that requests the city of Flint to provide additional information and documentation regarding all of their historic LCR compliance sampling sites and to compare the service line information reported on the LCR compliance monitoring certification reports against the service line information from the city of Flint's digitized index cards. Conflicts noted between the index cards and the LCR compliance monitoring certification will need further explanation, and the city of Flint will need to provide supporting documentation demonstrating these sites meet Tier 1 criteria. The letter will be provided to the city of Flint on November 9.

- The draft document for sampling protocol for residential exposure assessment is under development. DEQ staff discussed the preliminary plan with DHHS staff.

- The draft document for generic school sampling guidance for statewide distribution is under development. Staff is working on making this an easy-to-read and follow guidance document.

- DEQ staff met with DHHS staff on November 5 to discuss residential elevated blood lead investigations and a protocol for water testing.

Other Items:

- As provided by the DHHS, the purchased total water filter/pitcher distribution through November 6 is 13,649 units.

- Attached are the:
  - Final report for the plumbing evaluation of Freeman Elementary School
  - Spreadsheets that consolidate the lead and copper data for Freeman Elementary School
  - Consolidated spreadsheets for water samples submitted by Flint residents sorted by ZIP Code and sorted by concentration

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
November 9, 2015

FREEMAN ELEMENTARY SCHOOL

Outlet Sampling and Plumbing Assessment Recommendations

4001 Ogema Avenue, Flint, MI 48507

BACKGROUND INFORMATION

On Friday, October 23, 2015, the Department of Licensing and Regulatory Affairs (DLARA) and the Department of Environmental Quality (DEQ) conducted an assessment of Freeman Elementary School's plumbing system to gain a comprehensive understanding of how water moves through the building and what types of plumbing materials are used. The assessment identified the following potential sources of lead leaching into drinking water:

- Lead solder joints on copper piping
- Brass valves and brass fittings
- Brass components in fixtures
- Galvanized piping

The assessment also identified 31 faucets or fountains that provide water for drinking, cooking, and/or food preparation. The team developed a sequence for sampling the 31 faucets/fountains based on how the water travels through the building.

On Saturday, October 24, 2015, the DEQ and the DLARA completed sampling of the 31 faucets/fountains, in the order determined by the plumbing assessment from the previous day, following a stagnation period of 12 hours. At each of the 31 faucets/fountains identified, staff collected four samples. Two initial, 125-milliliter samples (P1 and P2) were collected immediately after turning on the tap. The water was then flushed for 30 seconds, and a third 125-milliliter sample (F1) was collected. Finally, the water was flushed for another two minutes, and the fourth 125-milliliter sample (F2) was collected. These samples were used to determine the impact of any lead sources in and around each specific faucet/fountain and its connecting plumbing.

On Saturday, October 31, 2015, the DEQ completed consecutive sampling at three of the 31 faucets/fountains following a stagnation period of 12 hours. This sampling was used to determine the impact of any lead sources located deep in the supply plumbing. The three sites included one site near the building service line, one site near the plumbing mid-point, and one site at the far end of the plumbing system. At each of these three sites, staff collected 10, 1-liter samples. The 10 samples were collected immediately after turning on the tap, and consecutively, without any flushing time in between.

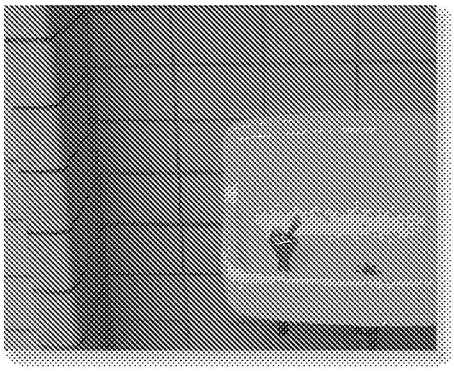
WATER SERVICE INFORMATION

A four-inch diameter cast iron water service line enters the school in the boiler room on the west wall. Piping in the boiler room immediately transitions into galvanized metal piping for cold water lines. Two separate galvanized cold water supply lines exit the boiler room. One in the northeast corner appears to serve the gym, auditorium, and proposed pre-K facilities on the north end of the school. The other exits the boiler room in the southwest corner and appears to serve the remainder of the school to the south, including the library. This line was also found to have grounding connections attached to the piping. Hot water is distributed in continuous loops that feed from and return to a central water heater in the boiler room. Hot water piping material, where exposed, was copper piping with 50/50 lead solder joints. Brass valves were seen throughout the building.

Outlets With Lead Levels Greater Than 15 Parts per Billion

The DEQ recommends school facilities take action if samples from any drinking water outlets show lead levels greater than 15 parts per billion. Based on the sampling conducted at 31 faucets/fountains on October 24, 2015, the following nine drinking water outlets had lead water level results greater than 15 parts per billion. Each of these nine outlets is listed below with its sample results, including a description of the potential source(s) of lead, and recommended actions for the school to take.

Outlet: Bubbler Drinking Fountain, Left (DW001)

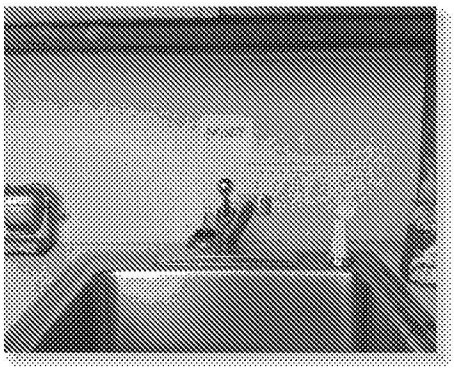


Location: Hallway outside Janitorial Room
Results: P1=40 parts per billion, P2=6 parts per billion
F1=4 parts per billion, F2=1 part per billion

These results suggest the highest contribution of lead may be from the bubbler itself. This bubbler fixture is believed to have a brass valve. The connection underneath the sink also appears to have some brass components, including the valve at the wall.

Replacement of this bubbler tap and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Sink Faucet (CF029)



Location: DHHS Office, west wall
Results: P1=17 parts per billion, P2=12 parts per billion
F1=2 parts per billion, F2=non-detect

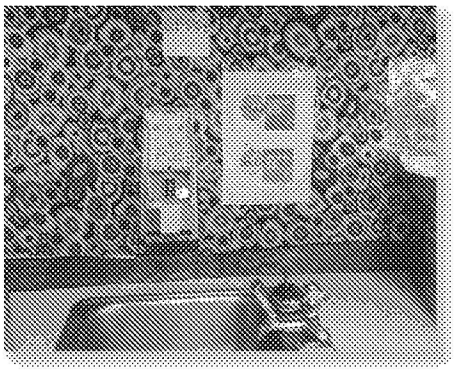
These results suggest the highest contribution of lead may be from the faucet and its connecting plumbing. The faucet is a Delta 400. This model faucet valve has brass components. This style faucet also has a mixing valve that may allow mixing of hot and cold water. Connecting plumbing in the cabinet under the sink may also contain brass components.

This faucet also has an aerator at the outlet. The aerator should be removed, inspected for particulate accumulations, scrubbed clean, and reinstalled. If particulates are found, the aerator should be periodically checked and cleaned.

Replacement of this faucet and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Integrated faucet and bubbler fountain (CF006)

Location: Classroom 2, south wall
Results: P1=16 parts per billion, P2=3 parts per billion
F1=1 part per billion, F2=1 part per billion

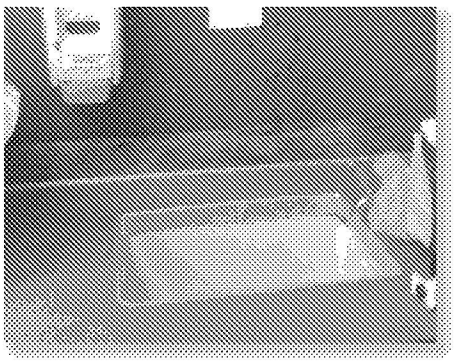


These results were collected from the faucet portion of the fixture and suggest the highest contribution of lead may be from the fixture itself. The make and model of this fixture is unknown, but appears to be made of chrome plated brass and may be connected on the underside of the sink using a brass nipple.

Replacement of this fixture and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Integrated faucet and bubbler fountain (CF014)

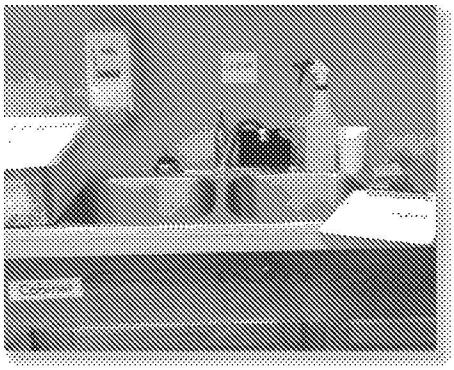
Location: Classroom 10, north wall
Results: P1=27 parts per billion, P2=7 parts per billion
F1=4 parts per billion, F2=3 parts per billion



These results were collected from the faucet portion of the fixture and suggest the highest contribution of lead may be from the fixture itself and its connecting plumbing. The make and model of this fixture is unknown, but appears to be made of chrome plated brass and may be connected on the underside of the sink using a brass nipple. Connecting plumbing in the cabinet under the sink may also contain brass components.

Replacement of this fixture and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Sink Faucet (CF013)



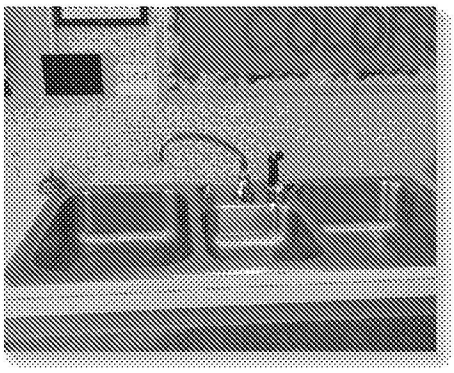
Location: Classroom 10, north wall
Results: P1=9 parts per billion, P2=18 parts per billion
F1=3 parts per billion, F2=3 parts per billion

These results suggest the highest contribution of lead may be from the connecting plumbing with some contribution from the faucet itself. The faucet appears to be a Delta 500 series. This model faucet may have some brass components. This style faucet also has a mixing valve that may allow mixing of hot and cold water. Connecting plumbing in the cabinet under the sink should be checked for brass components, including brass valves.

This faucet also has an aerator at the outlet. The aerator should be removed, inspected for particulate accumulations, scrubbed clean, and reinstalled. If particulates are found, the aerator should be periodically checked and cleaned.

Replacement of this faucet and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlet: Sink Faucet (CF015)



Location: Classroom 11, northeast corner
Results: P1=102 parts per billion, P2=326 parts per billion
F1=14 parts per billion, F2=11 parts per billion

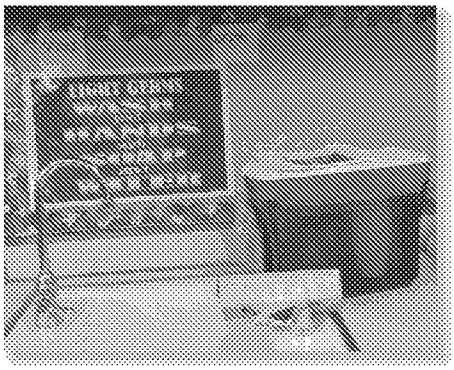
These results suggest the highest contribution of lead may be from the connecting plumbing and from the faucet itself. The faucet is an older design that uses a brass tube approximately 8 inches in length between the hot and cold water valves and connects to the outlet under the sink. This brass tube may be the primary source of lead, explaining the higher second (P2) sample result. The faucet and valves may also contain brass components. Connecting plumbing in the cabinet under the sink should be checked for additional brass components, including brass valves.

This faucet also has an aerator at the outlet. The aerator should be removed, inspected for particulate accumulations, scrubbed clean, and reinstalled. If particulates are found, the aerator should be periodically checked and cleaned.

Replacement of this faucet and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location and needs to be completed. If replacement is not currently feasible, **DO NOT USE THIS FAUCET FOR DRINKING OR COOKING.**

Outlet: Integrated faucet and bubbler fountain (CF024)

Location: Classroom 19, east wall
Results: P1=23 parts per billion, P2=3 parts per billion
F1=4 part per billion, F2=3 parts per billion



These results were collected from the faucet portion of the fixture and suggest the highest contribution of lead may be from the fixture itself. The make and model of this fixture is unknown, but appears to be made of chrome plated brass and may be connected on the underside of the sink using a brass nipple.

Replacement of this fixture and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

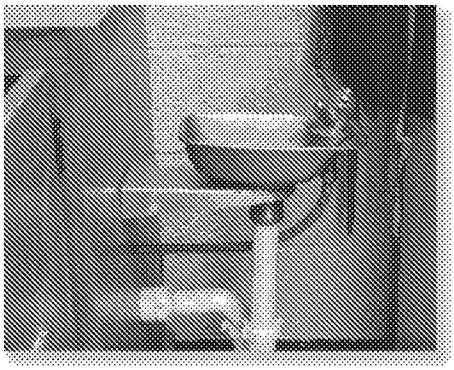
Outlet: Bubbler fountain (CF026)

Location: Classroom 14, west wall
Results: P1=36 parts per billion, P2=30 parts per billion
F1=17 parts per billion, F2=4 parts per billion

These results suggest the highest contribution of lead may be from the bubbler itself. This bubbler fixture appears to be made of chrome plated brass. This style bubbler typically has a 4-5-inch brass fitting that connects to a 3-inch brass nipple on the underside of the sink. This would explain the higher concentrations in the first two sample results. The connection underneath the sink may also have some brass components and should be checked, including the valve.

Replacement of this bubbler tap and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location and should be completed. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes prior to each use and for at least 4 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure. **In general, use of this fountain for drinking water should be discouraged.**

Outlet: Bubbler fountain (CF031)



Location: Proposed Pre-K Room, south wall
Results: P1=57 parts per billion, P2=3 parts per billion
F1=2 parts per billion, F2=non-detect

These results suggest the highest contribution of lead may be from the bubbler itself. This bubbler fixture appears to be made of chrome plated brass. This bubbler has a brass fitting connection to a brass nipple. The connector hose is not expected to be contributing lead.

Replacement of this bubbler tap and its connection plumbing with lead-free materials will significantly reduce lead exposure at this location and should be completed. If replacement is not currently feasible, sample results indicate that flushing this tap for 3 minutes following periods of stagnation is likely to reduce lead concentrations and lead exposure.

Outlets With Lead Levels 15 Parts per Billion or Less

While the remaining 22 outlets showed sample results to be at levels requiring no further action, several recommendations have been identified.

The fourth sample at each of these 22 outlets following approximately 3 minutes of use and flushing at a reduced flow reduced lead concentrations to 4 parts per billion or less. This indicates that flushing of all taps used for drinking, cooking, and/or food preparation for 4 minutes following periods of stagnation will further reduce lead exposure. It is recommended that a flushing operational procedure be developed for use by staff responsible for plumbing operations and maintenance.

Twelve of these outlets are comprised of similar materials as the outlets listed above and could potentially experience higher lead levels under extended periods of stagnation. These faucets/fountains include:

- Sink Side Bubbler Units in Classroom 12 (CF022), Classroom 5 (CF009), Classroom 21 (CF028), Hallway Fountain (DW002), Classroom 15 (CF018), Classroom 17 (CF020), and Classroom 1 (DW005).
- Integrated Faucet Bubbler Fountain Units in Classroom 6 (CF010), Classroom 9 (CF012), Classroom 4 (CF008), Classroom 3 (CF007), and Classroom 7 (CF011).

Replacement of these fixtures with lead-free materials is also recommended.

The remaining 10 outlets showed sample results of 15 parts per billion or less, requiring no further action or additional recommendations. These faucets/fountains include:

- Sink Faucets in Classroom 1 (CF004), Classroom 15 (CF017), Classroom 17 (CF019), Classroom 12 (CF021), Classroom 19 (CF023), Classroom 14 (CF025), Classroom 21 (CF027), and Proposed Pre-K Room (CF030).
- Kitchen Sink (cold) in the Community Room (KC003).
- Sink Side Bubbler Fountain in Classroom 11 (CF016).

Consecutive Sampling Results and Building Plumbing Recommendations

The consecutive samples taken at three sites in the building on October 31, 2015, provide additional confirmation that the highest contribution of lead appears to be from the individual faucet/fountains and not from the larger diameter supply plumbing within the school building.

Consecutive Sample No.	1	2	3	4	5	6	7	8	9	10
LOCATION	LEAD RESULT (PARTS PER BILLION; ND = NOT-DETECTED)									
Proposed Pre-K Rm Sink Faucet (CF030)	2	1	ND	ND	ND	ND	ND	ND	ND	ND
Classroom 11 Sink Faucet (CF015)	62	8	8	7	7	7	7	6	6	6
Classroom 21 Sink Faucet (CF027)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND

The continued presence of lead in samples collected at Classroom 11 (CF015) may be a result of lead particulates caught in the aerator/screen installed on the faucet outlet or may be from a source of lead further back in the plumbing system. However, the non-detect results from consecutive samples collected in Proposed Pre-K Room (CF030) and Classroom 21 (CF027) suggest any additional source of lead associated with Classroom 11 (CF015) is localized to the plumbing branch serving this faucet. The faucet aerator/screen in Classroom 11 (CF015) should be removed and inspected before completing a more in-depth plumbing analysis. Consecutive sampling results at Classroom 11 (CF015) support the water use restrictions specified for this outlet.

Governor Rick Snyder
November 17, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of November 9-13

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Conduct After Action Plan	DEQ	George Krisztian	Meeting held on 10/29/15 to discuss time line
2.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Meeting scheduled among DEQ staff for 11/20/15 to discuss draft changes
3.	Assist Governor's Flint Water Task Force	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Draft time line shared with Task Force on 11/13/15
4.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	Negotiations underway to contract with the Genesee County Health Department
5.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	
6.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	
7.	Follow up with city of Flint regarding corrosion control treatment and their plans to address requirements and options provided for in 10/30/15 DEQ letter	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Discussed with Flint's Technical Advisory Committee on 11/9/15

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
8.	Follow-up with city of Flint regarding installation of corrosion control	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Chemical feed pumps have been ordered; currently installing feed system piping and water booster pumps; and city of Flint anticipates operation by end of November
9.	Review Monthly Operation Reports (MORs) for Standby Operation of Flint Water Treatment Plant with city of Flint; draft letter to city of Flint documenting standby operation requirements	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Letter is drafted and will be sent to city of Flint the week of 11/9/15
10.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues; check weekly for status update	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Discussed during 11/9/15 Flint Technical Advisory Committee meeting; Genesee County is working on issues with Lapeer County Road Commission
11.	Continue evaluating city of Flint service line record status and comparison to sampling pool	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Letter provided to city of Flint on 11/9/15; response due to DEQ by 12/30/15
12.	Provide DHHS with any available cross-reference information regarding lead service lines and plumbing materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
13.	Develop draft sampling protocol for residential exposure assessment for DHHS	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Draft sampling protocol shared with DHHS on 11/10/15

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
14.	Make progress on drafting a generic school sampling guidance document for statewide distribution; target audience: schools served by municipal water	DEQ and DLARA	Jim Sygo Steve Busch Richard Benzie	Draft document under development to make it an easy-to-read and follow guidance document
15.	Attend Flint Technical Advisory Committee meeting on 11/9/15	DEQ	Jim Sygo Mike Prysby	Attended by Jim Sygo and Mike Prysby; presented DEQ's findings of lead sampling at Freeman Elementary School
16.	Draft summary reports for Brownell K-2 STEM Academy and Eisenhower Elementary School	DEQ and DLARA	George Krisztian Steve Busch	
17.	Conduct plumbing assessments at Durant-Tuuri-Mott Elementary School and Central Kitchen	DEQ and DLARA	George Krisztian Steve Busch	DEQ and DLARA completed plumbing assessments on 11/13/15
18.	Conduct sampling at Durant-Tuuri-Mott Elementary School and Central Kitchen	DEQ and DLARA	Jim Sygo George Krisztian Mike Prysby	DEQ and DLARA completed sampling on 11/14/15
19.	Evaluate laboratory analysis and perform data compilation for Doyle/Ryder Elementary School and Pierce Elementary School	DEQ	George Krisztian Steve Busch Mike Prysby	

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Key Actions:

- The Flint Technical Advisory Committee (TAC) meeting was held on November 9. The meeting included representatives from the EPA, DEQ, DHHS, and city of Flint, as well as other interested parties. Representatives from the city of Flint indicated that they were modifying the sampling protocol instructions to remove a reference to pre-flushing of service lines just prior to the beginning of the stagnation period for samples being utilized for compliance with the lead and copper rule. An update was given regarding a water plan that outlines short-term, intermediate term, and long-term goals that the city of Flint is working on in order to get switched over to the Karegnondi Water Authority. DEQ staff discussed corrosion control dosages and monitoring requirements in detail with the city of Flint and its consultants. Representatives from EPA reiterated the need for higher dosages of phosphate in order to expedite the formation of a protective layer in the city of Flint's water distribution system. This would be a supplemental addition of phosphate to the water coming from Detroit that only contains what is considered to be a maintenance dose.

- The samples for Brownell K-2 STEM Academy and Eisenhower Elementary School were analyzed and the data consolidated into spreadsheets. The results for both schools parallel the results found at Freeman Elementary School, in that the issues appear to be primarily located at the fixture. The percentage of locations needing corrective action appears to be greater than what was found at Freeman. Work has begun on putting together reports that provide recommendations for addressing the issues that were found. Once the reports have been completed, they will be shared with the Flint Community Schools Superintendent, and then the reports will be published to the Flint water Web site: www.mi.gov/flintwater.

- The water samples for Doyle/Ryder Elementary School and Pierce Elementary School have been analyzed. The results for these schools are currently being compiled and evaluated.

Positions:

- There are no new positions to report since last week.

Concerns:

- A Notice of Intent to Sue has been received from the Natural Resources Defense Council and the American Civil Liberties Union of Michigan. The subject reads:

Notice of Intent to Sue Under the Safe Drinking Water Act, 42 U.S.C. § 300j-8(b)(1)(a), for Failure to Control Lead in Drinking Water in Flint, Michigan, and Failure to Assist Michigan Schools with Lead Testing and Remediation

- A letter was sent by the DEQ on November 9 requesting the city of Flint to provide additional information and documentation concerning discrepancies between the water service line material reported in the lead/copper reporting forms and the water service line material reported in digitized water service index cards. The city of Flint must also complete the correlation for all of the remaining lead/copper sampling locations that were used since the start of monitoring under the lead and copper rule in 1992. Any additional further discrepancies must be explained. The city must complete this task by December 30. The existence of these discrepancies has been made public by the media.

Significant Events:

- A Frequently Asked Questions document has been prepared to address key events and decisions surrounding the Flint water situation. This document is being presented to the Governor's Flint Water Task Force to assist in providing key information to the investigation.

- DEQ Director Dan Wyant was interviewed by Rochelle Riley, *Detroit Free Press*, on November 10. Topics of discussion included the results from Freeman Elementary School and short-term, intermediate term, and long-term plans to address issues with Flint's water supply, as well as a discussion of corrosion controls and how they will be implemented moving forward.

- DEQ Flint Action Plan Coordinator George Krisztian was interviewed by NBC News 25 on November 11. The main topic of conversation was the results from Freeman Elementary School. The main point was that the results clearly indicated that the issues at the school were fixture-specific and were not deep within the plumbing infrastructure.

Changes from Previous Report:

- A meeting is scheduled for November 20 among DEQ staff to discuss draft legislative changes to Part 54 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

- The draft time line was shared with the Governor's Flint Water Task Force on November 13.

- DEQ staff discussed corrosion control dosages and monitoring requirements in more detail with the city of Flint and their consultant during the November 9 Flint TAC meeting. Orthophosphate dosage concerns brought to the table by the city of Flint's consultant were addressed by DEQ and EPA staff.

- DEQ staff followed up with the city of Flint during the November 9 TAC meeting regarding installation of corrosion control and confirmed that the chemical feed pumps have been ordered and delivery is approximately two weeks out. The Flint Water Treatment Plant (WTP) operators are currently installing the feed system piping and water booster pumps. The city of Flint anticipates having the corrosion control feed system installed and ready for operation by the end of November.

- DEQ staff has drafted a letter that establishes standby operation (test run) requirements for the Flint WTP, based upon the city's previous test run Monthly Operation Reports. The draft letter also discusses the potential for Flint to obtain a limited supply of raw water directly to the Flint WTP from the Karegnondi Water Authority prior to spring 2016 for treatment evaluation. The draft letter will be finalized and sent to the city of Flint the week of November 16.

- DEQ staff discussed with Genesee County during the November 9 TAC meeting the most recent stop work orders issued by the Lapeer County Road Commission (LCRC). Genesee County is continuing to install the pipeline and is working with the LCRC to correct the soil erosion control issues. Genesee County has not expressed a concern of this delaying their construction schedule.

- The DEQ sent a letter to the city of Flint on November 9. The letter requests the city of Flint to provide additional information/documentation concerning discrepancies between the water service line material reported in the lead/copper reporting forms and the water service line material reported in digitized water service index cards. The city of Flint must also complete the correlation for all of the remaining lead/copper sampling locations that were used since the start of monitoring under the lead and copper rule in 1992. Any additional further discrepancies must be explained. The city of Flint must complete this task by December 30.

- The draft sampling protocol was shared with DHHS on November 10.

- DEQ staff, Jim Sygo and Michael Prysby, attended the November 9 Flint TAC meeting as described above. Chief Deputy Director Sygo also presented DEQ's findings of the results of the lead sampling conducted at Freeman Elementary School.

- DEQ and DLARA staff completed plumbing assessments at Durant-Tuuri-Mott Elementary School and the central kitchen on November 13.

- DEQ staff conducted water sampling at Durant-Tuuri-Mott Elementary School and the central kitchen on November 14.

Other Items:

- As provided by the DHHS, the purchased total water filter/pitcher distribution through November 13 is approximately 14,000 units.

- Attached are the draft spreadsheets that consolidate the lead data for Brownell K-2 STEM Academy and Eisenhower Elementary School.

Prepared by: George Krisztian, Flint Action Plan Coordinator
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[redacted]
November 16, 2015

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Governor Rick Snyder
November 24, 2015
Daily Briefing

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Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Key Actions:

- An 18-Point Partnering Plan was developed to guide DEQ staff on the Flint water issue. The document focuses on areas of concern and identifies key partnerships. The issues in the Partnering Plan address short-term, intermediate term, and long-terms goals. This document will be reviewed at least weekly, and actions by DEQ staff with respect to the Partnering Plan will be documented. The Partnering Plan has become a standing agenda item and a central focus for the internal action plan meetings.

- On November 20 the weekly meeting was held at Flint between DEQ staff and city of Flint officials. Mayor Karen Weaver was present at the meeting. This was Mayor Weaver's first time in attendance at the weekly meeting. After introductions were made, Mayor Weaver was given an overview of the data from the free homeowner's testing. Mayor Weaver was informed that the samples were from any Flint resident who wished to have their water tested and, as such, were not necessarily representative of the site selection criteria as specified in the lead and copper rule, but with that said, the results were encouraging. Mayor Weaver was informed that over 3/4 of the samples had results of 5 parts per billion (ppb) or less and that approximately 92 percent of the sample results were at 15 ppb or less. It was also stressed to Mayor Weaver that, although the results were encouraging, there were also pockets of concern where the lead levels in the drinking water were significantly above 15 ppb.

  There was also discussion about making sure that water sample results were kept in context. In order for an individual to be sure with respect to their exposure to lead, they should have their blood tested. Individuals with an elevated blood level (EBL) would then be encouraged to have an EBL investigation done to evaluate all potential exposure pathways. There was then discussion as to what the EBL investigation entailed and how the water testing was being incorporated into the EBL.

  The meeting ended with an invitation by the DEQ to Mayor Weaver to come tour the DEQ's Laboratory to see first-hand how samples were analyzed. Mayor Weaver indicated that she would be very interested in a tour and that a date would be set up.

Positions:

- There are no new positions to report since last week.

Concerns:

- There are no new concerns to report since last week.

Significant Events:

- A Frequently Asked Questions document was provided to the Governor's Flint Water Task Force (Task Force) on November 16. DEQ staff subsequently met with the Task Force on November 18.

Changes from Previous Report:

- DEQ staff provided comments on the final draft of the DHHS protocol for EBL investigations. The sampling protocol will utilize 14 drinking water samples that will be used to identify potential sources of exposure to lead located in the plumbing system of residential dwellings.

- DEQ staff provided comment on the draft sampling protocol that the city of Flint is proposing to use for compliance monitoring for the lead and copper rule. This document has been forwarded to staff at the U.S. Environmental Protection Agency (EPA) for additional comment.

- On November 19 DEQ staff contacted EPA staff via e-mail regarding a request by the city of Flint for guidance on a corrosion control treatment evaluation for Karegnondi Water Authority source water use at the Flint Water Treatment Plant. A meeting has been scheduled for December 11 to discuss the issue with all parties.

- DEQ and DLARA staff conducted a plumbing assessment of Neithercut Elementary School in Flint on November 20.

- DEQ and DLARA staff conducted school sampling at Neithercut Elementary School in Flint on Saturday, November 21.

- A draft report for Eisenhower Elementary School was completed and is awaiting final publishing and will then be posted to the Flint water Web site: www.mi.gov/flintwater.

- Draft reports for Brownell K-2 STEM Academy and Pierce Elementary Schools are in progress and near completion.

- DEQ staff has been in meetings with the Office of the Auditor General audit team and have provided information and documentation as requested.

Other Item:

- Attached is the 18-point Partnering Plan that will guide the efforts of the DEQ regarding the Flint water issue.

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[redacted]
November 23, 2015

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Governor Rick Snyder
December 1, 2015
Daily Briefing

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Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Key Actions:

Due to the Thanksgiving holiday, this week's report is abbreviated.

Positions:

There are no new positions to report since last week.

Concerns:

There are no new concerns to report since last week.

Significant Events:

There are no significant events to report since last week.

Changes from Previous Report:

- The Flint Drinking Water Events Timeline has been revised. The header and footer were updated, and acronyms were generally removed. Permit numbers have been deleted, and dates were filled in to the extent possible. The most significant change is the December 31, 2014, item regarding end of the 1st monitoring period. This was rewritten to be consistent with the June 30, 2015, end of the 2nd monitoring period item. The compliance letter reporting the results was added on March 30, 2015.

- School sampling was suspended due to the holiday and is scheduled to continue on Saturday, December 5, 2015.

- The report for Eisenhower Elementary School was completed, has gone through final publishing, and will be posted to the Flint water Web site: www.mi.gov/flintwater.

- There are now a total of four schools in Flint that are not part of the Flint Community Schools that have requested plumbing assessments and sampling of their facilities. These facilities will be evaluated once the Flint school system evaluation has been completed. The four facilities include: Eagle's Nest Academy, Powers Catholic High School, International Academy of Flint, and St. Paul Lutheran School. It is anticipated that these facilities will be evaluated beginning sometime in January 2016.

- The internal after action group met on November 24, 2015, to discuss the newly-created 18-Point Partnering Plan. Each point was reviewed, and members were instructed to use the document as a plan moving forward. The Partnering Plan is meant to be a living document and will be revised as needed.

Other Items:

- Attached is the revised Flint Drinking Water Events Timeline.
- Attached is the Eisenhower Elementary School report.

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November 30, 2015

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FLINT DRINKING WATER EVENTS TIMELINE

Date	Event	Attachment
Pre-1967	Flint Water Treatment Plant in operation using Flint River for drinking water	1
Post-1967	Flint switched to Detroit Water and Sewerage Department for drinking water	None
January 2006	Discussions regarding Karegnondi Water Authority, *Preliminary Long-Term Water Supply for Genesee County*	2
June 25, 2009 September 2009	*Lake Huron Water Supply Study* *Karegnondi Water Authority* Executive Summary and Preliminary Engineering Report	3
March 2013	*Analysis of the Flint River as a Permanent Water Supply for the City of Flint*; Prepared for: City of Flint dated July 2011	4
April 2013	Flint notifies Detroit Water and Sewerage Department of contract discontinuation and joins the Karegnondi Water Authority	5
April 2013	Detroit Water and Sewerage Department sets termination of Flint water service contract to April 17, 2014	6
June 2013	Flint notifies the Department of Environmental Quality of intent to operate Flint Water Treatment Plant full time using Flint River for drinking water	7
April 2014	The Michigan Department of Environmental Quality issues Flint Water Treatment Plant construction permits for full time operation enhancements W141025 and W141026	9
May 2014	Flint stops purchasing Detroit Water and Sewerage Department water. Starts using the City of Flint Water Treatment Plant and Flint River for drinking water	10
August 2014	Flint *E. coli* bacteria violation, Localized System Boil Water Advisory	11
September 2014	Disinfection Byproducts compliance communication; the Michigan Department of Environmental Quality requests preemptive Operational Evaluation	12
September 2014	Flint Total Coliform Bacteria violation, Localized System Boil Water Advisory	13

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FLINT DRINKING WATER EVENTS TIMELINE

Date	Event	Attachment
October 2014	General Motors announces decision to stop using Flint River as source for production water	14
December 2014	Disinfection Byproducts quarterly violation begins	15
December 31, 2015	1st 6-month round of lead and copper monitoring ends. Results due from Flint to Michigan Department of Environmental Quality on January 10, 2015	None
January 21, 2015	City of Flint Public Meeting regarding disinfection byproducts and bacteria	17
February 26, 2015	E-mail from United States Environmental Protection Agency to Michigan Department of Environmental Quality regarding elevated lead sample	18
February 27, 2015	E-mail from United States Environmental Protection Agency to Michigan Department of Environmental Quality inquiring about Optimized Corrosion Control Treatment	19
February 27, 2015	Michigan Department of Environmental Quality response to United States Environmental Protection Agency email with statement regarding optimized corrosion control program	20
March 5, 2015	2nd Disinfection Byproducts quarterly violation notice	21
March 30, 2015	Michigan Department of Environmental Quality notifies Flint of Lead/Copper Monitoring Results.	16
April 3, 2015	Long Term 2 Enhanced Surface Water Treatment Rule Letter	22
April 6, 2015	Flint proposes installation of Granular Activated Carbon Filter media to reduce disinfection byproducts	23
April 23, 2015	United States Environmental Protection Agency e-mail to Michigan Department of Environmental Quality regarding corrosion control treatment	24
April 24, 2015 May 1, 2015	Michigan Department of Environmental Quality responds to United States Environmental Protection Agency regarding corrosion control treatment	25

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FLINT DRINKING WATER EVENTS TIMELINE

Date	Event	Attachment
April 27, 2015	United States Environmental Protection Agency provided bottles to 212 Browning for lead/copper analyses	26
May 6, 2015	Lead service line replaced at 212 Browning. United States Environmental Protection Agency on-site	27
May 28, 2015	Internal United States Environmental Protection Agency e-mail regarding results at 212 Browning	29
June 9, 2015	3rd Disinfection Byproducts quarterly violation notice	30
June 10, 2015	Semi-Annual Conference call with United States Environmental Protection Agency	31
June 30, 2015	E-mail from United States Environmental Protection Agency scheduling conference call on July 21, 2015 regarding elevated lead result and concerns regarding corrosion control	32
June 30, 2015	2nd 6-month round of lead and copper monitoring ends. Results due from Flint to Michigan Department of Environmental Quality on July 10, 2015	None
July 9, 2015	Michigan Department of Environmental Quality informed that United States Environmental Protection Agency draft internal memo is on ACLU website	33
July 14, 2015	Michigan Department of Environmental Quality issues construction permit to Flint for Granular Activated Carbon filter media W151055	34
July 21, 2015	Conference call with United States Environmental Protection Agency (Lead and Copper Rule implementation and Flint) during which it informs Michigan Department of Environmental Quality its interpretation of Lead and Copper Rule	35
July 24, 2015	Michigan Department of Environmental Quality e-mail and draft letter 90th percentile lead determination = 11 parts per billion and City of Flint requirement to add corrosion control treatment	36

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FLINT DRINKING WATER EVENTS TIMELINE

Date	Event	Attachment
July 28, 2015	Michigan Department of Environmental Quality received blood lead level information from Michigan Department of Health and Human Services indicating that results since the switch to the Flint River are consistent with past years seasonal variations	37
August 4, 2015	Meeting with city representatives at Governor's office	38
August 17, 2015	Michigan Department of Environmental Quality notifies Flint of lead/copper monitoring results and requires City to install corrosion control treatment	39
August 23, 2015	Michigan Department of Environmental Quality notified by an external party that a water quality study was about to begin in Flint	40
September 2, 2015	Disinfection Byproducts return to compliance	43
September 11, 2015	United States Environmental Protection Agency e-mail confirming that Michigan Department of Environmental Quality was never sent the draft June 24, 2015 memo	44
September 21, 2015	Meeting with Congressional representatives, legislators, United States Environmental Protection Agency and Michigan Department of Environmental Quality to discuss issues with water quality in Flint	45
September 22, 2015	Meeting/Conference call with Michigan Department of Health and Human Services, Genesee County Health Department, and Michigan Department of Environmental Quality to discuss lead education/outreach	46
September 24, 2015	Hurley Children's Hospital data reveals elevated blood lead levels in Flint children	47
September 24, 2015	Michigan Department of Health and Human Services response affirms State blood lead level data is more comprehensive than Hurley Hospital data	None

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FLINT DRINKING WATER EVENTS TIMELINE

Date	Event	Attachment
September 25, 2015	Flint issues Lead Advisory regarding drinking water	48
October 1, 2015	State Chief Medical Officer confirms Hurley blood lead level data	None
October 1, 2015	Genesee County Health Department issues "Do Not Drink" Advisory	49
October 2, 2015	Michigan Department of Environmental Quality and Michigan Department of Health and Human Services press conference. Governor's Flint Action Plan announced.	50
October 2, 2015	Genesee County Health Department school screening water samples collected for lead analysis	51
October 8, 2015	Governor Press Conference: Flint to reconnect to Great Lakes Water Authority/Detroit Water and Sewerage Department	52
October 15, 2015	State Legislature authorizes a $9 million to assist the City of Flint to pay for the return to the Detroit water system and to fund staff at schools to gauge lead exposure	None
October 16, 2015	First weekly coordination meeting held between the City of Flint and state agencies	None
October 16, 2015	Michigan Department of Environmental Quality meets with Flint Schools Superintendent and Genesee County Health Department	None
October 16, 2015	Flint switches back to Detroit Water and Sewerage Department for water	53
October 21, 2015	Governor Snyder announces formation of Flint Water Task Force to complete an After-Action Review	None
October 28, 2015	Michigan Department of Environmental Quality issues construction permit for additional corrosion control treatment W151104	54
October 30, 2015	Michigan Department of Environmental Quality letter to Flint regarding corrosion control treatment operation	55

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
FLINT DRINKING WATER EVENTS TIMELINE

Date	Event	Attachment
November 3, 2015	United States Environmental Protection Agency Memorandum regarding "Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems"	56
November 4, 2015	United States Environmental Protection Agency Memorandum regarding "Transmittal of Final Report – High Lead at Three Residences in Flint, Michigan"	57
Mid-Late 2016	Planned connection to Karegnondi Water Authority (Lake Huron water to Flint Water Treatment Plant)	None

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Governor Rick Snyder
October 23, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 19-23

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	This Action Step has been incorporated as part of the After Action Plan (Action Step #4)
2.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	Scheduled for 10/23/15 at 11:30 a.m.
3.	Figure out number of samples from schools and child care facilities	DEQ	Jim Sygo Pat Cook Steve Busch	1,300 samples (13 schools and 100 samples per school)
4.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting scheduled for 10/22/15
5.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
6.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
7.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
8.	$1 million for DEQ Laboratory billing code	DEQ	Maggie Pallone George Krisztian	Billing codes created on 10/21/15
9.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
10.	Develop letter to schools	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	This Action Step has been incorporated into Action Step #13
11.	Finalize sampling protocol	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Comments received from EPA's Flint Safe Drinking Water Task Force (Task Force); DEQ staff continuing to finalize protocol
12.	Confirm school sampling logistics	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Logistics have been finalized for the initial sampling scheduled for 10/24/15
13.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A meeting with the 10 remaining schools is tentatively scheduled for the week of 10/26/15
14.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting
15.	ODWMA staff observe a DLARA plumbing assessment	DEQ and DLARA	Steve Busch Pat Cook Mike Prysby	Initial plumbing assessment is scheduled for 10/23/15; sampling to occur on 10/24/15
16.	Develop sample form and chain of custody document	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ Laboratory has created a fillable PDF form for use in the school sampling protocol

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
17.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Conference call with EPA held on 10/20/15 to discuss comments
18.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Construction permit is in process
19.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ staff is reviewing and seeking clarification on comments received from EPA's Task Force
20.	Provide city of Flint updated monitoring schedule based on Detroit Water and Sewerage Department (DWSD)/Great Lakes Water Authority (GLWA) service	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
21.	Contact city of Flint and Genesee County Health Department daily for DWSD connection status updates	DEQ, Flint, and Genesee County Health Department	Jim Sygo Steve Busch Pat Cook Mike Prysby	Switch to DWSD completed on 10/16/15; city of Flint will let DEQ know if they run into any unforeseen issues
22.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Monitoring letter expected to be mailed on 10/22/15
23.	Verify city of Flint distribution operations under DWSD/GLWA service	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
24.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
25.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
26.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- The initial meeting for the internal After Action Plan is scheduled for October 22. The purpose of the meeting is to define the scope of the internal review, create a detailed time line, connect all communications together to determine where communications could have been improved, and create a list of lessons learned and action steps moving forward.

- Madhu Anderson has provided information for the creation of an external After Action Review Panel. The Panel members have been selected, and a press release was issued by the Governor's office on October 21.

- The DEQ Laboratory, working in conjunction with MDOT's Accounting Services Division, has created the necessary billing codes to allow payment for the lead and copper samples from the city of Flint to be processed.

- The EPA's Flint Safe Drinking Water Task Force (Task Force) has provided comments to staff in the Office of Drinking Water and Municipal Assistance (ODWMA) on the sampling protocol. These comments are being reviewed, and ODWMA staff is continuing to finalize the protocol.

- The logistics for the initial plumbing evaluation and subsequent water sampling have been finalized among staff from DEQ, DLARA, and DHHS. The plumbing inspection is scheduled for Friday, October 23, and the water samples will be taken on Saturday, October 24.

- DEQ staff is responding to comments on the corrosion control proposal made by the EPA's Task Force. DEQ staff is following up on questions raised during the October 20 conference call.

- A monitoring schedule letter is expected to be mailed on October 22. The monitoring schedule addresses the change back to a customer supply of the Great Lakes Water Authority. A final copy of the letter will be attached to tomorrow's update.

Additional Actions:

- At the request of Representative Sheldon Neeley, George Krisztian contacted Carlita Earl, Principal of the Eagle's Nest Academy. Ms. Earl has formally requested that Eagle's Nest Academy receive a plumbing evaluation and water sampling as outlined in the newly-developed school assessment protocol. Ms. Earl was informed that she would be added to the list of schools being evaluated and that the original 13 Flint Community Schools buildings would be

evaluated first and then the DEQ/DLARA/DHHS would expand the evaluation process to charter schools, parochial schools, and other childcare facilities. Ms. Earl was informed that since the Eagle's Nest Academy serves children in grades K-4 that they would be placed at the top of the list once the evaluations of the original 13 buildings are complete.

- Director Dan Wyant, Chief Deputy Director Jim Sygo, and George Krisztian met with a group of pastors and citizens who came to Constitution Hall to voice their concerns regarding the water in Flint. The discussion lasted for approximately one hour, and the topics included a history of events, questions regarding how decisions were made, and the plan moving forward. The group indicated that they had read a great deal in the media and were interested in finding out what DEQ's perspective of the situation was. The questions were tough, but the conversation was very respectful. The group was informed that an independent group external to the DEQ would be conducting an After Action Review, and this information seemed to be well-received.

- Shelly Edgerton of DLARA spoke to Eric Swanson of DTMB, who is going to call Howard Croft, Public Works Director, city of Flint, about the GIS program that the city of Flint is trying to run. Eric will follow up with Shelly after the conversation. In addition, DLARA will be meeting again with the city of Flint.

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[redacted]
October 22, 2015

Governor Rick Snyder
October 28, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 26-30

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting held 10/22/15
2.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
3.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
4.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
5.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	
6.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A meeting with the 10 remaining schools is tentatively scheduled for the week of 10/26/15
7.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	Meeting scheduled for 10/27/15
8.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Summary of Flint's corrosion control plan submitted to EPA

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
9.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Remaining items due are anticipated to be provided on 10/27/15
10.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Comments by DEQ to city of Flint have been provided
11.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues; check weekly for status update	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Issues regarding soil erosion controls during construction are being addressed
12.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	Nearly 11,000 records received and waiting for review by DEQ staff
13.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
14.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting
15.	Create a generic school sampling guidance document for statewide distribution; target audience: schools served by municipal water	DEQ and DLARA	Jim Sygo Steve Busch Richard Benzie	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
16.	Confirm plumbing assessment and sampling is scheduled for Brownell K-2 STEM Academy and Eisenhower Elementary School	DEQ and DLARA	Jim Sygo Steve Busch Mike Prysby	Tentatively scheduled for 10/30/15

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- A meeting has been confirmed for October 27 with DHHS to discuss all lead education material for schools.

- DEQ staff discussed with the city of Flint's consultant, Lockwood, Andrews & Newnam, Inc., the remaining items that are needed for issuance of Michigan's Safe Drinking Water Act (Act 399) construction permit. Staff anticipates receiving these items on October 27.

- DEQ staff obtained approximately 10,895 records from the city of Flint's GIS system regarding service line index cards and extracted them into a table format for additional data review. Data review has been initiated by DEQ's Lansing District Office staff.

- DLARA and DEQ staff tentatively plans to conduct plumbing assessments at Brownell K-2 STEM Academy and Eisenhower Elementary School on October 30. DLARA staff will contact the Flint Community Schools' facility administrator to confirm the date and approximate times.

Additional Actions:

- All of the 124 samples that were taken at Freeman Elementary School on Saturday, October 24, were analyzed by the DEQ Laboratory on Monday, October 26. The data is being compiled into a spreadsheet to allow an evaluation of the various sampling points. Initial indications are that there will need to be some replacement of plumbing fixtures, but issues do not seem to exist deeper into the plumbing infrastructure. Further sequential testing will be conducted at select points to verify that water is being drawn from the main.

- DEQ staff met to discuss lessons learned from the sampling event at Freeman Elementary School. A number of observations were made with respect to how to streamline the process. The group agreed to incorporate several of the observations into the sampling protocol. The protocol is being updated to reflect these changes.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
October 27, 2015

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Governor Rick Snyder
October 2, 2015
Daily Briefing

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Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
  - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
  - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
  - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
  - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
  - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
  - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
  - We encourage anyone with a concern to get their water tested.
  - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**
  - A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
  - This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
  - If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
    - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
    - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
    - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
    - This is a problem in communities statewide, and one we want to address with a long-term solution.
    - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
    - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
    - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
    -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
    - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.
    - She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
    - Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
    - As an additional precaution, water filters will be available to low-income families.
    - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
    - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
    - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.

        - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
        - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
    - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

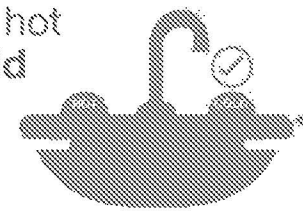
2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 1 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not been used recently.

If the City of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



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You can also email flintwater@cityofflint.com

Visit **www.mi.gov/FlintWater** for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater.
State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Oct. 1, 2015

Michigan leaders to announce action plan for Flint drinking water

Friday, Oct. 2 at 1:30 p.m.
Local, state and federal leaders will host a press conference to announce a comprehensive action plan for addressing drinking water concerns in Flint. Participants will include:

- Harvey Hollins, Director of the Office of Urban Initiatives for Gov. Rick Snyder
- Dan Wyant, Director for the Michigan Department of Environmental Quality
- Nick Lyon, Director for the Michigan Department of Health and Human Services
- Dr. Eden Wells, Chief Medical Executive for the Michigan Department of Health and Human Services
- Dayne Walling, Mayor of Flint
- Other local, state and federal officials

Location:
Kettering University, Innovation Center
1300 Bluff St.
Flint, MI 48504

This is a media event open to credentialed news media only. Media who plan to attend this event should RSVP by noon Friday. Contact Rosemarie Olszewski at 517-284-6700 or olszewskir@michigan.gov.

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

October 1, 2015

Senate Elections and Government Reform Committee
House Elections Committee

Dear Honorable Members:

Attached is a comprehensive report that covers the results of the Secretary of State's Administrative Audit of the City of Flint's Elections Operations. As you know, this audit and report are required by Public Act 43 of 2015, which allowed the City of Flint to move forward with a city primary on August 4, 2015. The report covers several categories, with findings and recommendations for each.

The Bureau of Elections continues to work closely with the City of Flint to prepare for the city general election scheduled for November 3, 2015. If you have questions or need additional information, please contact Christopher Thomas, Michigan Director of Elections. Thank you.

Sincerely,

Ruth A. Johnson
Secretary of State

Attachment

RICHARD H. AUSTIN BUILDING • 4TH FLOOR • 430 W. ALLEGAN • LANSING, MICHIGAN 48918

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STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

FINDINGS AND RECOMMENDATIONS: ADMINISTRATIVE AUDIT OF THE CITY OF FLINT ELECTIONS OPERATIONS

October 2015

Background

Elections for the Mayor and select City Council positions in the City of Flint were scheduled to occur in 2015, with an August 4, 2015 primary and November 3, 2015 general election. In early 2015, the Flint City Clerk's office provided instructional packets to potential city office candidates which explained the filing deadline and process, along with other key steps related to the city election. Unfortunately, the information provided included an inaccurate candidate filing deadline. The mandated filing deadline for city offices in 2015 was 4:00 p.m. on April 21; the deadline published by the Clerk's office was 4:00 p.m. on April 28. The discrepancy was not discovered until after the April 21 deadline. Only one candidate filed timely by that deadline, and that filing was found to be insufficient, with petitions containing fewer than the required number of registered voter signatures. Several other candidates relied on the erroneous information and filed by the published April 28 deadline, but were unable to be certified for the ballot due to missing the true filing deadline. Due to these issues, the City of Flint was not scheduled to hold an August primary, and the only option for city office candidates would be to run as write-in candidates at the November 3, 2015 city general election.

As a result of this problem, the Michigan State legislature enacted Public Act 43 of 2015, which allowed the city nominating petition filing deadline in this case to be adjusted to the erroneously-published date. The law further established several other follow-up requirements, including the conduct of an administrative audit of the City Clerk's elections operations by the Secretary of State. This report summarizes the steps taken by the Secretary of State, Bureau of Elections (BOE) to conduct this administrative audit, including overall findings and recommendations.

Scope

On June 24, 2015, Bureau of Elections staff met with the Flint City Clerk and her staff to conduct the administrative audit. The meeting included detailed discussions and review of the city's election-related processes and materials, including:

- Staffing roles and responsibilities
- Candidate filings
- Utilization of State-issued training manuals, reference materials and communications

- Use of the Qualified Voter File (QVF) and Electronic Pollbook (EPB) programs
- Precinct and polling place structure
- Precinct Inspectors and training programs
- Absent Voter (AV) ballot issuance procedures and use of Absent Voter Counting Boards (AVCBs) on Election Day
- Election-related forms and supplies and Election Day precinct kit materials
- Use of Receiving Boards (RBs) on Election Day
- Prior election-related issues and problems

In addition, the Bureau of Elections worked collaboratively with the Clerk's office to plan for, attend and conduct several precinct inspector training sessions prior to the August 4, 2015 city primary. BOE staff also attended the Genesee County Board of Canvassers' meeting on August 5, 2015, where Flint's primary election results were certified.

Findings and Recommendations

The following information summarizes the Bureau of Elections' overall findings and recommendations with respect to the review of the City of Flint's elections operations:

Staffing

Staffing in the Flint City Clerk's elections division includes the Clerk and two full-time staff. A Deputy Clerk position was eliminated several years ago, leaving the Clerk to become solely responsible for the overall office organization and many of the day-to-day administrative duties. Three additional staff are available to assist during key election timeframes (prior to and up to Election Day). These staff members are shared with the city's business licensing area.

The full-time and shared staff all have several years of experience working in elections and have a good overall understanding of the key areas of election administration. The full-time staff are cross-trained to handle all major duties. The shared staff assist in conducting precinct inspector training, assisting walk-in customers during key election timeframes (e.g., absent voter ballot requests) and a variety of other duties to prepare for Election Day.

RECOMMENDATIONS - Staffing:

- Two full-time staff are insufficient to support elections in a municipality the size of Flint; The State strongly recommends that the City re-establish a Deputy Clerk position and, if possible, convert at least one of the shared staff positions to a full-time position, 100% assigned to election-related duties.
- If it is possible to add staff as recommended, the State recommends developing a more formal structure for specialty areas for assigned staff; especially with respect to training and communications.
- The re-establishment of a Deputy Clerk position would allow for additional focused improvements to be made in the overall organization of the office and additional delegation of administrative duties to staff; which, in turn would further improve the entire staff's ability to handle all required duties in a more proactive manner.

Candidate Filings

The Clerk's practice of preparing instructional packets for city office candidates is one that is practiced by many other municipalities. The content of these packets is obviously critical and should be informative, yet brief and easy to follow. The problem that occurred this year involved a single staff member that inaccurately calculated the filing deadline date – and the lack of review by others in the office of this critical piece of information. Flint's candidate packets for this year utilized appropriate petition forms, which were updated in early 2015. Flint staff review the packets with candidates as the packets are issued. Flint's procedure for processing candidate filings follows State guidelines and they appropriately utilize the QVF system for verifying petitions.

RECOMMENDATIONS – Candidate Filings:

- PA 43 of 2015 requires the City Clerk to submit city election filing information, calendars and petition forms for approval to the Secretary of State through the end of 2017.
- The City Clerk's office should establish and document the process for developing candidate information packets; in addition to the staff person that develops the information packet, procedures should include review by at least two other staff in the office.
- The Bureau of Elections regularly publishes *Key Dates and Deadlines* calendars for every election. These calendars are typically made available during the last quarter of the calendar year for the next upcoming election year. The developer of the city's candidate information packet should confirm key dates by referencing the BOE-published calendar. If candidate packets are prepared prior to the availability of the BOE calendars, Flint staff should confer with BOE and receive verification of the filing deadline in writing. Candidate packets should be kept as simple as possible.

QVF / Data Maintenance / AV Processing

QVF processing (including ongoing data maintenance) is handled by the two full-time permanent staff members. They appear to have an appropriate use and overall understanding of key voter registration and QVF processes. BOE staff reviewed the current status of Flint's portion of the State QVF and found that Flint appears to be conducting regular data maintenance (e.g., over 2,000 voters have been sent confirmation notices and are in the cancellation countdown process required by the National Voter Registration Act).

Absent Voter ballot processing: Flint does not utilize a permanent AV list. All staff (including shared staff) handle AV ballot requests and intake of voted AV ballots. Flint uses the QVF AV ballot tracker feature as required, which provides online updates to voters that AV ballots have been issued and received back from voters. It should be noted that Flint has continual issues with candidates and others submitting numerous AV applications, apparently in violation of State law. The Flint City Clerk regularly communicates with BOE on these issues and has developed a structured process for obtaining the identity of individuals submitting AV applications in bulk, reminding these individuals of the legal requirements and referring individuals to local law enforcement when there is evidence of possible law violations.

RECOMMENDATIONS – QVF / Data Maintenance / AV Processing:

- Processes appear sound.

- BOE will conduct a detailed review with Flint staff on all required data maintenance tasks (as we are doing with other jurisdictions).
- Flint should continue current practices with respect to handling suspected violations of AV ballot application requirements by certain individuals. Note that use of a Permanent AV list may assist with further ensuring the integrity of the AV application process.

Electronic Pollbook (EPB)

While Flint planned to begin using the EPB program in 2014, it had not implemented this program prior to August 2015. The State highly recommends use of the EPB program, as it has proven to be effective in speeding up processing on Election Day, reducing costs and increasing accuracy in assigning proper ballots to voters and recording voter history.

BOE recognizes that fully implementing EPB in a municipality the size of Flint is a large undertaking that must be approached carefully; specialized and targeted training is also required. BOE worked with Flint to pilot the EPB program in one precinct for the August primary. The program operated smoothly in that precinct.

RECOMMENDATIONS - EPB:

- BOE will continue to work with Flint on continued gradual expansion of the EPB program, which will include development of a detailed rollout and training plan for additional expansion in November 2015 and full EPB use city-wide in 2016.

Precincts / Polling Places

The City of Flint currently has 61 precincts. Although the structure seems to have been developed primarily to avoid the possibility of split precincts (e.g., in some elections, more than one ballot style would be required in a precinct with multiple county commissioner districts), the current structure is inefficient and contains several precincts with smaller than desired numbers. By law, an individual precinct can have no more than 2,999 active voters. For example, in Flint there is one precinct with 0 voters (apparently established because of a future planned residential development) and three precincts with less than 300 voters.

Flint's precinct structure is also challenging due to a State House split and unusually-constructed county commissioner district boundaries that conflict with City Ward boundaries. Of Flint's 26 polling locations, 19 house multiple precincts. Although temporary precinct consolidations are allowed in non-statewide elections, the Clerk and her staff are not in favor of changing the precinct structure temporarily in odd years due to the of steps needed to change the structure from year to year, and the possible need to communicate those changes to the city's voters in the odd year.

The City of Flint has also faced ongoing challenges due to the occasional closure of schools that also act as polling locations, creating an ongoing problem for the Clerk's office in finding and establishing new locations and communicating these changes to voters. Just this year, three schools that were previously polling places have closed.

RECOMMENDATIONS - Precincts / Polling Places:

- The Bureau of Elections recommends a significant effort toward permanently consolidating Flint's precincts. We have conducted an analysis of the current precinct structure and believe a model can be successfully pursued that would result in 40-45 precincts, as opposed to the current 61-precinct structure. Permanently consolidating precincts in many of the current polling locations that house multiple precincts is a logical step that should be easy to implement.
- Decreasing the number of precincts will help to alleviate problems with respect to having adequate numbers of pollworkers, equipment testing, AVCB processing timeframes and overall costs. Making these changes will entail additional training (and assignment of more experienced workers/chairpersons) in the few precincts that will now have occasional ballot splits. In addition, with implementation of the EPB city-wide, identification of the proper ballot style for each voter is simplified and easily identified by the program. The Bureau of Elections stands ready to assist the city in planning for and implementing these changes.
- BOE further recommends that the city consider temporary precinct consolidations in odd-year elections. Although employing a different precinct structure in the odd year will require changes to precinct kits and materials and a clear communication plan for voters, a step-by-step process template for implementing these changes can be developed that will allow for temporary consolidations in odd years to work smoothly. Use of temporary precinct consolidations in the odd year for city elections will also further cut costs and processing timeframes on Election Day.
- In the long-term (with the next redistricting cycle), BOE recommends that Genesee County consider changes to the current County Commission boundaries, to better coincide with the city's ward and precinct structure.

Polling Place Accessibility

Flint also faces challenges with respect to the accessibility of its current polling locations. Substantial Federal funding has been available since 2003 to cover the costs of needed structural improvements to polling places, to ensure full access to these facilities for voters with disabilities. Over the last few years, the city has come under the scrutiny of the U.S. Department of Justice because of complaints and concerns relating to polling place accessibility.

Prior to 2014, Flint utilized the available Federal grant program to complete improvements in only three polling locations. Starting in 2013, a dedicated BOE staff specialist provided direct assistance to Flint to assess polling locations, identify needed accessibility improvements and to develop and submit Federal grant funding requests to complete those identified changes. Due to these efforts, accessibility improvements have been completed in an additional 11 locations. Based on our assessments, there are still 11 additional locations that are in need of similar improvements.

While Federal grant funding has been available for several years, this program is reaching its end, and it is unlikely that these funds will be available to cover the costs of the remaining needed changes. Per Federal and State law, polling places must be fully accessible to voters

with disabilities, and Flint has an ongoing requirement to continue to identify needed changes and make these improvements, even if Federal funding is no longer available.

RECOMMENDATIONS - Polling Place Accessibility

- Flint must complete full accessibility assessments for any remaining polling location without a recent assessment on file (within the last five years). These assessments must be completed no later than March 2016.
- A plan must be developed to complete all identified needed changes in 2016. If Federal funding is no longer available, these plans must include plans for providing city funding.

Precinct Inspectors / Training / Precinct Materials

The training of precinct inspectors is critical to ensuring a smooth Election Day. Flint's pre-election training programs consist of numerous training sessions, and targeted training for specific groups (e.g., new election inspectors, experienced election inspectors, precinct chairpersons, Absent Voter Counting Board members and Receiving Board members). This is a logical approach to structuring training that is also used in other jurisdictions.

Over the past couple of years, the Clerk's office has begun to conduct detailed reviews and analyses after each election. These reviews occur precinct by precinct and identify Election Day mistakes and issues, including the inspectors/teams from each precinct. The Clerk has utilized this data to identify precinct teams that may need additional training or reassignment, or should be relieved of their duties. The data is also used to develop targeted training and hands-on sessions focusing on the topics that seem to be most problematic. These efforts are commended and should continue.

Prior to the August 4, 2015 Flint city primary, the Clerk's office scheduled 12 different training sessions. The sessions began in mid-July with an overall 'all workers' session that all inspectors were expected to attend. From there, the specialized group sessions began, with 2-3 sessions per group. All sessions generally followed a similar format, with both full group presentations and breakout sessions with hands-on exercises, focusing on a limited number of topics (typically, those issues most commonly identified by the post-election analyses, such as sealing ballot containers and completing end of night ballot summaries). BOE training staff attended these sessions and provided ongoing assistance and feedback to the Clerk throughout the process. At the final sessions that were conducted the week before Election Day, BOE training specialists also presented a structured session for each group that covered all key Election Day issues.

While the overall training schedule was established several weeks in advance of the primary, the format and structure for each individual training session was not planned extensively in advance. Several members of the Clerk's staff participated and presented at the various sessions, but the presentations generally consisted of a quick review of reminders, followed by break-out and hands-on type sessions that were more casual in nature. Decisions with respect to the overall training plan and the agenda/topics to be covered in each session seemed to be handled exclusively by the Clerk.

Flint has developed a series of job aids for their precinct inspectors, AVCB inspectors and Receiving Board members that provide step-by-step instructions covering each group's particular duties. The materials provided to the precinct inspectors include separate, color-coded instructions and reminders for opening the polls, closing the polls and delivery of precinct materials to the Receiving Board. These materials are well-structured for their purpose and seem to be well-used by the inspectors.

Flint continually struggles to recruit inspectors from both major political parties. The Clerk has increased her efforts to reach out to Republican Party officials in her area to obtain additional inspectors from this party to maintain the required political balance in each precinct.

RECOMMENDATIONS - Precinct Inspectors / Training / Precinct Materials:

- BOE supports the continued practice of conducting targeted training sessions for specialized groups (new inspectors, experienced inspectors, chairpersons, AVCB inspectors and Receiving Board members). As use of the Electronic Pollbook is further expanded, EPB inspectors should be added as a new specific training group.
- There was some confusion as to whether inspectors needed to attend a single training session or all identified sessions for their particular group. While it is reasonable to offer multiple training sessions for each group to allow for flexibility for inspectors' schedules, a specific agenda and topics should be developed for each session prior to the scheduled training, with clear direction to participants on which portions they need to attend.
- Attendance should be tracked, with follow-up for any non-attendees.
- The structure and format for each session should be established by the way of a standard reusable training template, utilizing a group presentation which includes a display (e.g., power point), handouts, and structured presentations by staff. BOE has provided template training presentations that can be utilized (and modified to meet Flint's specific needs) for new inspectors, experienced inspectors and chairpersons.
- All key Election Day processing steps should be regularly covered and reinforced - not just the most common problem issues. Exceptions and most commonly-missed items should also be highlighted, but in a structured presentation style – all that include time for group interaction and a question/answer period.
- Hands-on sessions should continue to be offered at the conclusion of the standard training presentations, as well as in a 'lab' or 'drop in' type mode currently offered by the Clerk's office.
- BOE strongly recommends that a dedicated staff person be established as a single point of contact in the office for training purposes. This person would be responsible for finalizing a reusable training template (for each specialized group), as well as the overall training schedule prior to each election and the specific training plans for each session. This resource would develop the full plan for each election cycle several weeks prior to the conduct of training – for approval by the Clerk.
- The Clerk should continue the practice of tracking specific types of problem issues that occur in each election, include reinforcement on those key points in subsequent training sessions and follow up with specific teams and inspectors as warranted.

- It should be noted that PA 43 of 2015 also requires the city's precinct inspectors to attend county-based training sessions in 2016 and 2017. BOE recommends that Flint continue to offer their regular targeted group training sessions in these years as well.
- The Clerk should continue to seek out and recruit inspectors that provide partisan balance (e.g., working with Republican Party officials in the area – even outside of Genesee County and/or at State level). The Clerk and her staff should also continue to seek out younger workers (e.g., high school and college students), who may be more adept at using the EPB program. The Clerk should also continue to mentor and encourage inspectors who show leadership potential to serve as precinct chairpersons in the future.

Absent Voter Counting Boards (AVCBs)

Over the past couple of years, the most notable problems in Flint's election process have involved the overall process and timeliness for completing Absent Voter Counting Board duties. AVCBs are used in many large jurisdictions to process all absent voter ballots in one location. The overall process and steps involved in completing Election Day tabulation in AVCBs are specialized and differ from in-person Election Day precincts.

Similar to the analysis conducted on Election Day precincts (mentioned above), Flint has similarly studied their AVCB operation and has recently made several positive structural changes. Earlier this year, Flint collaborated with other local clerks in the county to share AVCB best practices and develop a standardized model for AVCB processing. This was also a very positive step. Flint has used the new process in the past two elections which seems to have performed well, improved timeframes for completing AVCB processes on Election Night, and reduced incidences of problems.

RECOMMENDATIONS - Absent Voter Counting Boards (AVCBs):

- Flint should continue the use of the new countywide AVCB model and should continue the expansion of the number of teams employed to work in the AVCB. Flint should move towards the utilization of seven full AVCB teams, each working with one pollbook and tabulator. For the August 4 primary, only two teams were used, but in November, seven teams are planned. Use of additional AVCB teams will ensure more timely completion of AVCB duties on election night, but may also require additional training/support of additional inspectors that have not yet worked the new process.
- Flint should continue to use the countywide AVCB processing model, but should customize the instructions to create a Flint-specific training and instructional document for Flint's AVCB inspectors. Using this customized document, a Flint-specific AVCB training template and presentation should also be developed.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure more timely completion of the AVCB process in Flint, with fewer problems in completing and balancing each AVCB precinct.

Receiving Boards (RBs)

In recent years, some Election Day problems have occurred in Flint due to the inconsistent use of Receiving Boards. These boards, now mandated for use in every election, involve use of specialized precinct inspectors that receive materials from each precinct on Election Night,

confirm that ballot containers are properly sealed, and ensure that all materials are present and in balance and are delivered to the appropriate parties. These procedures prove to be very effective in ensuring a smooth canvass and election certification at the county level. In addition, the law mandates specific steps be used by Receiving Board inspectors, which cover all criteria used to declare a precinct recountable - therefore, greatly increasing the likelihood that all precincts can be recounted if necessary.

Over the past couple of years, Flint has developed a structured RB process, which includes a check-in table; 8-10, two-person RB teams; and a designated 'Problem Table' to focus in and resolve any precinct that appears to have problems. The RB training session included structured checklists, presentations by experienced RB members and sample materials with guidelines on precinct items that must be verified. This is a logical structure that seems to be working well.

The County Canvass process for the August 4 primary went very smoothly. One problem was identified (and resolved) that should have been caught by the RB teams, but the Canvassers reported that this past election was one of the best performed in recent memory.

RECOMMENDATIONS - Receiving Boards (RBs):

- Flint's revised RB process appears sound. This seems to be a well-working model that has helped to uncover and rectify problem issues while they can still be resolved. It is also appropriately used with the AVCB, which has been a main source of issues in the past.
- An overall lead worker should be assigned to oversee and study the Flint RB model, to help ensure that all problems are being identified and resolved and that the large number of precinct arrivals are moving fluidly through the system.
- Dedicated, experienced RB teams should be assigned to handle AVCB precincts as they arrive, to further ensure timely completion of the AVCB process and delivery to the county.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure fewer problems in Flint's Receiving Boards.

Working Relationship with County

Although not a specific point of review within the administrative audit, it should be noted that a clear conflict exists between the Genesee County Clerk and Flint City Clerk. Both parties express a high level of frustration, resentment and distrust of the other – which is extremely unfortunate and counterproductive to running problem-free elections. While there are experienced and hard-working staff in both offices, this negative relationship between the Clerks poses extreme challenges to running any election smoothly in Flint. The election administration responsibilities between the County and City differ, but these two entities must work together in every election.

There have been a number of instances where critical comments were made via the local media, some even on Election Day. The Bureau of Elections strongly recommends that the Clerks refrain from these types of actions, allow their staff to work productively and professionally together, and to set their differences aside when it comes to completing the

necessary steps prior to the election, on Election Day and through each election's canvass and final election certification. The Bureau further recommends that the Clerks refrain from airing differences publicly.

Overall Summary, Conclusions & Next Steps

Although a number of problem issues have been uncovered after recent elections in Flint, the Flint City Clerk and her staff are dedicated to studying their operations and are working to eliminate the source of possible mistakes; a challenge in a large jurisdiction with a small staff and hundreds of precinct inspectors. Several strengths are present which can be built upon, including:

- An experienced core staff with a strong overall grasp of election-related procedures and requirements;
- Experienced precinct chairpersons and inspectors who share the Clerk's goal to ensure problem-free elections;
- Targeted training programs that reinforce issues that are identified in post-election analyses;
- Revised Absent Voter Counting Board processes which have incorporated best practices of other jurisdictions and has already proven to streamline Flint's overall AVCB operation; and
- A renewed focus on the importance of the Receiving Board process and the final checks on Election Day to ensure recountability and a smooth county canvass.

In any organization with large and complex responsibilities, opportunities for improvements exist. The Bureau of Elections recommends a structured plan of action for implementing the recommendations offered in this report, with a primary focus on:

- Securing additional full-time election staff and a Deputy Clerk in the City of Flint;
- Detailed evaluation and consolidation of the current precinct structure (decreasing the number of precincts);
- Completing accessibility improvements in all polling locations;
- Development of formal procedures for compiling and reviewing key information distributed by the Clerk's office (e.g., filing deadlines and candidate packets); as well as data maintenance tasks (a BOE focus statewide);
- Continued development of a formal, reusable training template, along with a dedicated staff resource for developing the training plan prior to every election; and
- Gradual expansion of the use of the Electronic Pollbook city-wide.

The Bureau of Elections will continue to work with the Flint City Clerk and her staff to assist with preparations for the city's November 3, 2015 general election, to fulfill the remaining requirements of PA 43 of 2015 and to assist with implementing (where possible) the recommendations presented in this report.

Governor Rick Snyder
October 2, 2015
Daily Briefing

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Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
  - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
  - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
  - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
  - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
  - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
  - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
  - We encourage anyone with a concern to get their water tested.
  - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**
  - A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
  - This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
  - If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
    - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
    - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
    - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
    - This is a problem in communities statewide, and one we want to address with a long-term solution.
    - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
    - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
    - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
    -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
    - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.
    - She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
    - Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
    - As an additional precaution, water filters will be available to low-income families.
    - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
    - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
    - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.

        - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
        - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
    - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

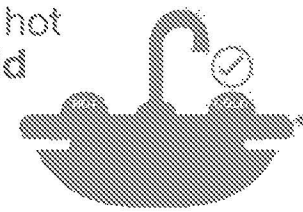
2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 1 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not been used recently.

If the City of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



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Visit **www.mi.gov/FlintWater** for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater.
State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Oct. 1, 2015

Michigan leaders to announce action plan for Flint drinking water

Friday, Oct. 2 at 1:30 p.m.
Local, state and federal leaders will host a press conference to announce a comprehensive action plan for addressing drinking water concerns in Flint. Participants will include:

- Harvey Hollins, Director of the Office of Urban Initiatives for Gov. Rick Snyder
- Dan Wyant, Director for the Michigan Department of Environmental Quality
- Nick Lyon, Director for the Michigan Department of Health and Human Services
- Dr. Eden Wells, Chief Medical Executive for the Michigan Department of Health and Human Services
- Dayne Walling, Mayor of Flint
- Other local, state and federal officials

Location:
Kettering University, Innovation Center
1300 Bluff St.
Flint, MI 48504

This is a media event open to credentialed news media only. Media who plan to attend this event should RSVP by noon Friday. Contact Rosemarie Olszewski at 517-284-6700 or olszewskir@michigan.gov.

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

October 1, 2015

Senate Elections and Government Reform Committee
House Elections Committee

Dear Honorable Members:

Attached is a comprehensive report that covers the results of the Secretary of State's Administrative Audit of the City of Flint's Elections Operations. As you know, this audit and report are required by Public Act 43 of 2015, which allowed the City of Flint to move forward with a city primary on August 4, 2015. The report covers several categories, with findings and recommendations for each.

The Bureau of Elections continues to work closely with the City of Flint to prepare for the city general election scheduled for November 3, 2015. If you have questions or need additional information, please contact Christopher Thomas, Michigan Director of Elections. Thank you.

Sincerely,

Ruth A. Johnson
Secretary of State

Attachment

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STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

FINDINGS AND RECOMMENDATIONS: ADMINISTRATIVE AUDIT OF THE CITY OF FLINT ELECTIONS OPERATIONS

October 2015

Background

Elections for the Mayor and select City Council positions in the City of Flint were scheduled to occur in 2015, with an August 4, 2015 primary and November 3, 2015 general election. In early 2015, the Flint City Clerk's office provided instructional packets to potential city office candidates which explained the filing deadline and process, along with other key steps related to the city election. Unfortunately, the information provided included an inaccurate candidate filing deadline. The mandated filing deadline for city offices in 2015 was 4:00 p.m. on April 21; the deadline published by the Clerk's office was 4:00 p.m. on April 28. The discrepancy was not discovered until after the April 21 deadline. Only one candidate filed timely by that deadline, and that filing was found to be insufficient, with petitions containing fewer than the required number of registered voter signatures. Several other candidates relied on the erroneous information and filed by the published April 28 deadline, but were unable to be certified for the ballot due to missing the true filing deadline. Due to these issues, the City of Flint was not scheduled to hold an August primary, and the only option for city office candidates would be to run as write-in candidates at the November 3, 2015 city general election.

As a result of this problem, the Michigan State legislature enacted Public Act 43 of 2015, which allowed the city nominating petition filing deadline in this case to be adjusted to the erroneously-published date. The law further established several other follow-up requirements, including the conduct of an administrative audit of the City Clerk's elections operations by the Secretary of State. This report summarizes the steps taken by the Secretary of State, Bureau of Elections (BOE) to conduct this administrative audit, including overall findings and recommendations.

Scope

On June 24, 2015, Bureau of Elections staff met with the Flint City Clerk and her staff to conduct the administrative audit. The meeting included detailed discussions and review of the city's election-related processes and materials, including:

- Staffing roles and responsibilities
- Candidate filings
- Utilization of State-issued training manuals, reference materials and communications

- Use of the Qualified Voter File (QVF) and Electronic Pollbook (EPB) programs
- Precinct and polling place structure
- Precinct Inspectors and training programs
- Absent Voter (AV) ballot issuance procedures and use of Absent Voter Counting Boards (AVCBs) on Election Day
- Election-related forms and supplies and Election Day precinct kit materials
- Use of Receiving Boards (RBs) on Election Day
- Prior election-related issues and problems

In addition, the Bureau of Elections worked collaboratively with the Clerk's office to plan for, attend and conduct several precinct inspector training sessions prior to the August 4, 2015 city primary. BOE staff also attended the Genesee County Board of Canvassers' meeting on August 5, 2015, where Flint's primary election results were certified.

Findings and Recommendations

The following information summarizes the Bureau of Elections' overall findings and recommendations with respect to the review of the City of Flint's elections operations:

Staffing

Staffing in the Flint City Clerk's elections division includes the Clerk and two full-time staff. A Deputy Clerk position was eliminated several years ago, leaving the Clerk to become solely responsible for the overall office organization and many of the day-to-day administrative duties. Three additional staff are available to assist during key election timeframes (prior to and up to Election Day). These staff members are shared with the city's business licensing area.

The full-time and shared staff all have several years of experience working in elections and have a good overall understanding of the key areas of election administration. The full-time staff are cross-trained to handle all major duties. The shared staff assist in conducting precinct inspector training, assisting walk-in customers during key election timeframes (e.g., absent voter ballot requests) and a variety of other duties to prepare for Election Day.

RECOMMENDATIONS - Staffing:

- Two full-time staff are insufficient to support elections in a municipality the size of Flint; The State strongly recommends that the City re-establish a Deputy Clerk position and, if possible, convert at least one of the shared staff positions to a full-time position, 100% assigned to election-related duties.
- If it is possible to add staff as recommended, the State recommends developing a more formal structure for specialty areas for assigned staff; especially with respect to training and communications.
- The re-establishment of a Deputy Clerk position would allow for additional focused improvements to be made in the overall organization of the office and additional delegation of administrative duties to staff; which, in turn would further improve the entire staff's ability to handle all required duties in a more proactive manner.

Candidate Filings

The Clerk's practice of preparing instructional packets for city office candidates is one that is practiced by many other municipalities. The content of these packets is obviously critical and should be informative, yet brief and easy to follow. The problem that occurred this year involved a single staff member that inaccurately calculated the filing deadline date – and the lack of review by others in the office of this critical piece of information. Flint's candidate packets for this year utilized appropriate petition forms, which were updated in early 2015. Flint staff review the packets with candidates as the packets are issued. Flint's procedure for processing candidate filings follows State guidelines and they appropriately utilize the QVF system for verifying petitions.

RECOMMENDATIONS – Candidate Filings:

- PA 43 of 2015 requires the City Clerk to submit city election filing information, calendars and petition forms for approval to the Secretary of State through the end of 2017.
- The City Clerk's office should establish and document the process for developing candidate information packets; in addition to the staff person that develops the information packet, procedures should include review by at least two other staff in the office.
- The Bureau of Elections regularly publishes *Key Dates and Deadlines* calendars for every election. These calendars are typically made available during the last quarter of the calendar year for the next upcoming election year. The developer of the city's candidate information packet should confirm key dates by referencing the BOE-published calendar. If candidate packets are prepared prior to the availability of the BOE calendars, Flint staff should confer with BOE and receive verification of the filing deadline in writing. Candidate packets should be kept as simple as possible.

QVF / Data Maintenance / AV Processing

QVF processing (including ongoing data maintenance) is handled by the two full-time permanent staff members. They appear to have an appropriate use and overall understanding of key voter registration and QVF processes. BOE staff reviewed the current status of Flint's portion of the State QVF and found that Flint appears to be conducting regular data maintenance (e.g., over 2,000 voters have been sent confirmation notices and are in the cancellation countdown process required by the National Voter Registration Act).

Absent Voter ballot processing: Flint does not utilize a permanent AV list. All staff (including shared staff) handle AV ballot requests and intake of voted AV ballots. Flint uses the QVF AV ballot tracker feature as required, which provides online updates to voters that AV ballots have been issued and received back from voters. It should be noted that Flint has continual issues with candidates and others submitting numerous AV applications, apparently in violation of State law. The Flint City Clerk regularly communicates with BOE on these issues and has developed a structured process for obtaining the identity of individuals submitting AV applications in bulk, reminding these individuals of the legal requirements and referring individuals to local law enforcement when there is evidence of possible law violations.

RECOMMENDATIONS – QVF / Data Maintenance / AV Processing:

- Processes appear sound.

- BOE will conduct a detailed review with Flint staff on all required data maintenance tasks (as we are doing with other jurisdictions).
- Flint should continue current practices with respect to handling suspected violations of AV ballot application requirements by certain individuals. Note that use of a Permanent AV list may assist with further ensuring the integrity of the AV application process.

Electronic Pollbook (EPB)

While Flint planned to begin using the EPB program in 2014, it had not implemented this program prior to August 2015. The State highly recommends use of the EPB program, as it has proven to be effective in speeding up processing on Election Day, reducing costs and increasing accuracy in assigning proper ballots to voters and recording voter history.

BOE recognizes that fully implementing EPB in a municipality the size of Flint is a large undertaking that must be approached carefully; specialized and targeted training is also required. BOE worked with Flint to pilot the EPB program in one precinct for the August primary. The program operated smoothly in that precinct.

RECOMMENDATIONS - EPB:

- BOE will continue to work with Flint on continued gradual expansion of the EPB program, which will include development of a detailed rollout and training plan for additional expansion in November 2015 and full EPB use city-wide in 2016.

Precincts / Polling Places

The City of Flint currently has 61 precincts. Although the structure seems to have been developed primarily to avoid the possibility of split precincts (e.g., in some elections, more than one ballot style would be required in a precinct with multiple county commissioner districts), the current structure is inefficient and contains several precincts with smaller than desired numbers. By law, an individual precinct can have no more than 2,999 active voters. For example, in Flint there is one precinct with 0 voters (apparently established because of a future planned residential development) and three precincts with less than 300 voters.

Flint's precinct structure is also challenging due to a State House split and unusually-constructed county commissioner district boundaries that conflict with City Ward boundaries. Of Flint's 26 polling locations, 19 house multiple precincts. Although temporary precinct consolidations are allowed in non-statewide elections, the Clerk and her staff are not in favor of changing the precinct structure temporarily in odd years due to the of steps needed to change the structure from year to year, and the possible need to communicate those changes to the city's voters in the odd year.

The City of Flint has also faced ongoing challenges due to the occasional closure of schools that also act as polling locations, creating an ongoing problem for the Clerk's office in finding and establishing new locations and communicating these changes to voters. Just this year, three schools that were previously polling places have closed.

RECOMMENDATIONS - Precincts / Polling Places:

- The Bureau of Elections recommends a significant effort toward permanently consolidating Flint's precincts. We have conducted an analysis of the current precinct structure and believe a model can be successfully pursued that would result in 40-45 precincts, as opposed to the current 61-precinct structure. Permanently consolidating precincts in many of the current polling locations that house multiple precincts is a logical step that should be easy to implement.
- Decreasing the number of precincts will help to alleviate problems with respect to having adequate numbers of pollworkers, equipment testing, AVCB processing timeframes and overall costs. Making these changes will entail additional training (and assignment of more experienced workers/chairpersons) in the few precincts that will now have occasional ballot splits. In addition, with implementation of the EPB city-wide, identification of the proper ballot style for each voter is simplified and easily identified by the program. The Bureau of Elections stands ready to assist the city in planning for and implementing these changes.
- BOE further recommends that the city consider temporary precinct consolidations in odd-year elections. Although employing a different precinct structure in the odd year will require changes to precinct kits and materials and a clear communication plan for voters, a step-by-step process template for implementing these changes can be developed that will allow for temporary consolidations in odd years to work smoothly. Use of temporary precinct consolidations in the odd year for city elections will also further cut costs and processing timeframes on Election Day.
- In the long-term (with the next redistricting cycle), BOE recommends that Genesee County consider changes to the current County Commission boundaries, to better coincide with the city's ward and precinct structure.

Polling Place Accessibility

Flint also faces challenges with respect to the accessibility of its current polling locations. Substantial Federal funding has been available since 2003 to cover the costs of needed structural improvements to polling places, to ensure full access to these facilities for voters with disabilities. Over the last few years, the city has come under the scrutiny of the U.S. Department of Justice because of complaints and concerns relating to polling place accessibility.

Prior to 2014, Flint utilized the available Federal grant program to complete improvements in only three polling locations. Starting in 2013, a dedicated BOE staff specialist provided direct assistance to Flint to assess polling locations, identify needed accessibility improvements and to develop and submit Federal grant funding requests to complete those identified changes. Due to these efforts, accessibility improvements have been completed in an additional 11 locations. Based on our assessments, there are still 11 additional locations that are in need of similar improvements.

While Federal grant funding has been available for several years, this program is reaching its end, and it is unlikely that these funds will be available to cover the costs of the remaining needed changes. Per Federal and State law, polling places must be fully accessible to voters

with disabilities, and Flint has an ongoing requirement to continue to identify needed changes and make these improvements, even if Federal funding is no longer available.

RECOMMENDATIONS - Polling Place Accessibility

- Flint must complete full accessibility assessments for any remaining polling location without a recent assessment on file (within the last five years). These assessments must be completed no later than March 2016.
- A plan must be developed to complete all identified needed changes in 2016. If Federal funding is no longer available, these plans must include plans for providing city funding.

Precinct Inspectors / Training / Precinct Materials

The training of precinct inspectors is critical to ensuring a smooth Election Day. Flint's pre-election training programs consist of numerous training sessions, and targeted training for specific groups (e.g., new election inspectors, experienced election inspectors, precinct chairpersons, Absent Voter Counting Board members and Receiving Board members). This is a logical approach to structuring training that is also used in other jurisdictions.

Over the past couple of years, the Clerk's office has begun to conduct detailed reviews and analyses after each election. These reviews occur precinct by precinct and identify Election Day mistakes and issues, including the inspectors/teams from each precinct. The Clerk has utilized this data to identify precinct teams that may need additional training or reassignment, or should be relieved of their duties. The data is also used to develop targeted training and hands-on sessions focusing on the topics that seem to be most problematic. These efforts are commended and should continue.

Prior to the August 4, 2015 Flint city primary, the Clerk's office scheduled 12 different training sessions. The sessions began in mid-July with an overall 'all workers' session that all inspectors were expected to attend. From there, the specialized group sessions began, with 2-3 sessions per group. All sessions generally followed a similar format, with both full group presentations and breakout sessions with hands-on exercises, focusing on a limited number of topics (typically, those issues most commonly identified by the post-election analyses, such as sealing ballot containers and completing end of night ballot summaries). BOE training staff attended these sessions and provided ongoing assistance and feedback to the Clerk throughout the process. At the final sessions that were conducted the week before Election Day, BOE training specialists also presented a structured session for each group that covered all key Election Day issues.

While the overall training schedule was established several weeks in advance of the primary, the format and structure for each individual training session was not planned extensively in advance. Several members of the Clerk's staff participated and presented at the various sessions, but the presentations generally consisted of a quick review of reminders, followed by break-out and hands-on type sessions that were more casual in nature. Decisions with respect to the overall training plan and the agenda/topics to be covered in each session seemed to be handled exclusively by the Clerk.

Flint has developed a series of job aids for their precinct inspectors, AVCB inspectors and Receiving Board members that provide step-by-step instructions covering each group's particular duties. The materials provided to the precinct inspectors include separate, color-coded instructions and reminders for opening the polls, closing the polls and delivery of precinct materials to the Receiving Board. These materials are well-structured for their purpose and seem to be well-used by the inspectors.

Flint continually struggles to recruit inspectors from both major political parties. The Clerk has increased her efforts to reach out to Republican Party officials in her area to obtain additional inspectors from this party to maintain the required political balance in each precinct.

RECOMMENDATIONS - Precinct Inspectors / Training / Precinct Materials:

- BOE supports the continued practice of conducting targeted training sessions for specialized groups (new inspectors, experienced inspectors, chairpersons, AVCB inspectors and Receiving Board members). As use of the Electronic Pollbook is further expanded, EPB inspectors should be added as a new specific training group.
- There was some confusion as to whether inspectors needed to attend a single training session or all identified sessions for their particular group. While it is reasonable to offer multiple training sessions for each group to allow for flexibility for inspectors' schedules, a specific agenda and topics should be developed for each session prior to the scheduled training, with clear direction to participants on which portions they need to attend.
- Attendance should be tracked, with follow-up for any non-attendees.
- The structure and format for each session should be established by the way of a standard reusable training template, utilizing a group presentation which includes a display (e.g., power point), handouts, and structured presentations by staff. BOE has provided template training presentations that can be utilized (and modified to meet Flint's specific needs) for new inspectors, experienced inspectors and chairpersons.
- All key Election Day processing steps should be regularly covered and reinforced - not just the most common problem issues. Exceptions and most commonly-missed items should also be highlighted, but in a structured presentation style – all that include time for group interaction and a question/answer period.
- Hands-on sessions should continue to be offered at the conclusion of the standard training presentations, as well as in a 'lab' or 'drop in' type mode currently offered by the Clerk's office.
- BOE strongly recommends that a dedicated staff person be established as a single point of contact in the office for training purposes. This person would be responsible for finalizing a reusable training template (for each specialized group), as well as the overall training schedule prior to each election and the specific training plans for each session. This resource would develop the full plan for each election cycle several weeks prior to the conduct of training – for approval by the Clerk.
- The Clerk should continue the practice of tracking specific types of problem issues that occur in each election, include reinforcement on those key points in subsequent training sessions and follow up with specific teams and inspectors as warranted.

- It should be noted that PA 43 of 2015 also requires the city's precinct inspectors to attend county-based training sessions in 2016 and 2017. BOE recommends that Flint continue to offer their regular targeted group training sessions in these years as well.
- The Clerk should continue to seek out and recruit inspectors that provide partisan balance (e.g., working with Republican Party officials in the area – even outside of Genesee County and/or at State level). The Clerk and her staff should also continue to seek out younger workers (e.g., high school and college students), who may be more adept at using the EPB program. The Clerk should also continue to mentor and encourage inspectors who show leadership potential to serve as precinct chairpersons in the future.

Absent Voter Counting Boards (AVCBs)

Over the past couple of years, the most notable problems in Flint's election process have involved the overall process and timeliness for completing Absent Voter Counting Board duties. AVCBs are used in many large jurisdictions to process all absent voter ballots in one location. The overall process and steps involved in completing Election Day tabulation in AVCBs are specialized and differ from in-person Election Day precincts.

Similar to the analysis conducted on Election Day precincts (mentioned above), Flint has similarly studied their AVCB operation and has recently made several positive structural changes. Earlier this year, Flint collaborated with other local clerks in the county to share AVCB best practices and develop a standardized model for AVCB processing. This was also a very positive step. Flint has used the new process in the past two elections which seems to have performed well, improved timeframes for completing AVCB processes on Election Night, and reduced incidences of problems.

RECOMMENDATIONS - Absent Voter Counting Boards (AVCBs):

- Flint should continue the use of the new countywide AVCB model and should continue the expansion of the number of teams employed to work in the AVCB. Flint should move towards the utilization of seven full AVCB teams, each working with one pollbook and tabulator. For the August 4 primary, only two teams were used, but in November, seven teams are planned. Use of additional AVCB teams will ensure more timely completion of AVCB duties on election night, but may also require additional training/support of additional inspectors that have not yet worked the new process.
- Flint should continue to use the countywide AVCB processing model, but should customize the instructions to create a Flint-specific training and instructional document for Flint's AVCB inspectors. Using this customized document, a Flint-specific AVCB training template and presentation should also be developed.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure more timely completion of the AVCB process in Flint, with fewer problems in completing and balancing each AVCB precinct.

Receiving Boards (RBs)

In recent years, some Election Day problems have occurred in Flint due to the inconsistent use of Receiving Boards. These boards, now mandated for use in every election, involve use of specialized precinct inspectors that receive materials from each precinct on Election Night,

confirm that ballot containers are properly sealed, and ensure that all materials are present and in balance and are delivered to the appropriate parties. These procedures prove to be very effective in ensuring a smooth canvass and election certification at the county level. In addition, the law mandates specific steps be used by Receiving Board inspectors, which cover all criteria used to declare a precinct recountable - therefore, greatly increasing the likelihood that all precincts can be recounted if necessary.

Over the past couple of years, Flint has developed a structured RB process, which includes a check-in table; 8-10, two-person RB teams; and a designated 'Problem Table' to focus in and resolve any precinct that appears to have problems. The RB training session included structured checklists, presentations by experienced RB members and sample materials with guidelines on precinct items that must be verified. This is a logical structure that seems to be working well.

The County Canvass process for the August 4 primary went very smoothly. One problem was identified (and resolved) that should have been caught by the RB teams, but the Canvassers reported that this past election was one of the best performed in recent memory.

RECOMMENDATIONS - Receiving Boards (RBs):

- Flint's revised RB process appears sound. This seems to be a well-working model that has helped to uncover and rectify problem issues while they can still be resolved. It is also appropriately used with the AVCB, which has been a main source of issues in the past.
- An overall lead worker should be assigned to oversee and study the Flint RB model, to help ensure that all problems are being identified and resolved and that the large number of precinct arrivals are moving fluidly through the system.
- Dedicated, experienced RB teams should be assigned to handle AVCB precincts as they arrive, to further ensure timely completion of the AVCB process and delivery to the county.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure fewer problems in Flint's Receiving Boards.

Working Relationship with County

Although not a specific point of review within the administrative audit, it should be noted that a clear conflict exists between the Genesee County Clerk and Flint City Clerk. Both parties express a high level of frustration, resentment and distrust of the other – which is extremely unfortunate and counterproductive to running problem-free elections. While there are experienced and hard-working staff in both offices, this negative relationship between the Clerks poses extreme challenges to running any election smoothly in Flint. The election administration responsibilities between the County and City differ, but these two entities must work together in every election.

There have been a number of instances where critical comments were made via the local media, some even on Election Day. The Bureau of Elections strongly recommends that the Clerks refrain from these types of actions, allow their staff to work productively and professionally together, and to set their differences aside when it comes to completing the

necessary steps prior to the election, on Election Day and through each election's canvass and final election certification. The Bureau further recommends that the Clerks refrain from airing differences publicly.

Overall Summary, Conclusions & Next Steps

Although a number of problem issues have been uncovered after recent elections in Flint, the Flint City Clerk and her staff are dedicated to studying their operations and are working to eliminate the source of possible mistakes; a challenge in a large jurisdiction with a small staff and hundreds of precinct inspectors. Several strengths are present which can be built upon, including:

- An experienced core staff with a strong overall grasp of election-related procedures and requirements;
- Experienced precinct chairpersons and inspectors who share the Clerk's goal to ensure problem-free elections;
- Targeted training programs that reinforce issues that are identified in post-election analyses;
- Revised Absent Voter Counting Board processes which have incorporated best practices of other jurisdictions and has already proven to streamline Flint's overall AVCB operation; and
- A renewed focus on the importance of the Receiving Board process and the final checks on Election Day to ensure recountability and a smooth county canvass.

In any organization with large and complex responsibilities, opportunities for improvements exist. The Bureau of Elections recommends a structured plan of action for implementing the recommendations offered in this report, with a primary focus on:

- Securing additional full-time election staff and a Deputy Clerk in the City of Flint;
- Detailed evaluation and consolidation of the current precinct structure (decreasing the number of precincts);
- Completing accessibility improvements in all polling locations;
- Development of formal procedures for compiling and reviewing key information distributed by the Clerk's office (e.g., filing deadlines and candidate packets); as well as data maintenance tasks (a BOE focus statewide);
- Continued development of a formal, reusable training template, along with a dedicated staff resource for developing the training plan prior to every election; and
- Gradual expansion of the use of the Electronic Pollbook city-wide.

The Bureau of Elections will continue to work with the Flint City Clerk and her staff to assist with preparations for the city's November 3, 2015 general election, to fulfill the remaining requirements of PA 43 of 2015 and to assist with implementing (where possible) the recommendations presented in this report.

Governor Rick Snyder
October 2, 2015
Daily Briefing

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Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
  - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
  - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
  - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
  - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
  - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
  - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
  - We encourage anyone with a concern to get their water tested.
  - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**
  - A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
  - This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
  - If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
    - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
    - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
    - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
    - This is a problem in communities statewide, and one we want to address with a long-term solution.
    - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
    - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
    - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
    -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
    - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.
    - She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
    - Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
    - As an additional precaution, water filters will be available to low-income families.
    - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
    - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
    - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.

        - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
        - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
    - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

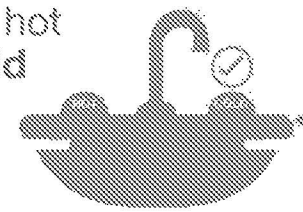
2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 1 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not been used recently.

If the City of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



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TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater.
State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Oct. 1, 2015

Michigan leaders to announce action plan for Flint drinking water

Friday, Oct. 2 at 1:30 p.m.
Local, state and federal leaders will host a press conference to announce a comprehensive action plan for addressing drinking water concerns in Flint. Participants will include:

- Harvey Hollins, Director of the Office of Urban Initiatives for Gov. Rick Snyder
- Dan Wyant, Director for the Michigan Department of Environmental Quality
- Nick Lyon, Director for the Michigan Department of Health and Human Services
- Dr. Eden Wells, Chief Medical Executive for the Michigan Department of Health and Human Services
- Dayne Walling, Mayor of Flint
- Other local, state and federal officials

Location:
Kettering University, Innovation Center
1300 Bluff St.
Flint, MI 48504

This is a media event open to credentialed news media only. Media who plan to attend this event should RSVP by noon Friday. Contact Rosemarie Olszewski at 517-284-6700 or olszewskir@michigan.gov.

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

October 1, 2015

Senate Elections and Government Reform Committee
House Elections Committee

Dear Honorable Members:

Attached is a comprehensive report that covers the results of the Secretary of State's Administrative Audit of the City of Flint's Elections Operations. As you know, this audit and report are required by Public Act 43 of 2015, which allowed the City of Flint to move forward with a city primary on August 4, 2015. The report covers several categories, with findings and recommendations for each.

The Bureau of Elections continues to work closely with the City of Flint to prepare for the city general election scheduled for November 3, 2015. If you have questions or need additional information, please contact Christopher Thomas, Michigan Director of Elections. Thank you.

Sincerely,

Ruth A. Johnson
Secretary of State

Attachment

RICHARD H. AUSTIN BUILDING • 4TH FLOOR • 430 W. ALLEGAN • LANSING, MICHIGAN 48918

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STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

FINDINGS AND RECOMMENDATIONS: ADMINISTRATIVE AUDIT OF THE CITY OF FLINT ELECTIONS OPERATIONS

October 2015

Background

Elections for the Mayor and select City Council positions in the City of Flint were scheduled to occur in 2015, with an August 4, 2015 primary and November 3, 2015 general election. In early 2015, the Flint City Clerk's office provided instructional packets to potential city office candidates which explained the filing deadline and process, along with other key steps related to the city election. Unfortunately, the information provided included an inaccurate candidate filing deadline. The mandated filing deadline for city offices in 2015 was 4:00 p.m. on April 21; the deadline published by the Clerk's office was 4:00 p.m. on April 28. The discrepancy was not discovered until after the April 21 deadline. Only one candidate filed timely by that deadline, and that filing was found to be insufficient, with petitions containing fewer than the required number of registered voter signatures. Several other candidates relied on the erroneous information and filed by the published April 28 deadline, but were unable to be certified for the ballot due to missing the true filing deadline. Due to these issues, the City of Flint was not scheduled to hold an August primary, and the only option for city office candidates would be to run as write-in candidates at the November 3, 2015 city general election.

As a result of this problem, the Michigan State legislature enacted Public Act 43 of 2015, which allowed the city nominating petition filing deadline in this case to be adjusted to the erroneously-published date. The law further established several other follow-up requirements, including the conduct of an administrative audit of the City Clerk's elections operations by the Secretary of State. This report summarizes the steps taken by the Secretary of State, Bureau of Elections (BOE) to conduct this administrative audit, including overall findings and recommendations.

Scope

On June 24, 2015, Bureau of Elections staff met with the Flint City Clerk and her staff to conduct the administrative audit. The meeting included detailed discussions and review of the city's election-related processes and materials, including:

- Staffing roles and responsibilities
- Candidate filings
- Utilization of State-issued training manuals, reference materials and communications

- Use of the Qualified Voter File (QVF) and Electronic Pollbook (EPB) programs
- Precinct and polling place structure
- Precinct Inspectors and training programs
- Absent Voter (AV) ballot issuance procedures and use of Absent Voter Counting Boards (AVCBs) on Election Day
- Election-related forms and supplies and Election Day precinct kit materials
- Use of Receiving Boards (RBs) on Election Day
- Prior election-related issues and problems

In addition, the Bureau of Elections worked collaboratively with the Clerk's office to plan for, attend and conduct several precinct inspector training sessions prior to the August 4, 2015 city primary. BOE staff also attended the Genesee County Board of Canvassers' meeting on August 5, 2015, where Flint's primary election results were certified.

Findings and Recommendations

The following information summarizes the Bureau of Elections' overall findings and recommendations with respect to the review of the City of Flint's elections operations:

Staffing

Staffing in the Flint City Clerk's elections division includes the Clerk and two full-time staff. A Deputy Clerk position was eliminated several years ago, leaving the Clerk to become solely responsible for the overall office organization and many of the day-to-day administrative duties. Three additional staff are available to assist during key election timeframes (prior to and up to Election Day). These staff members are shared with the city's business licensing area.

The full-time and shared staff all have several years of experience working in elections and have a good overall understanding of the key areas of election administration. The full-time staff are cross-trained to handle all major duties. The shared staff assist in conducting precinct inspector training, assisting walk-in customers during key election timeframes (e.g., absent voter ballot requests) and a variety of other duties to prepare for Election Day.

RECOMMENDATIONS - Staffing:

- Two full-time staff are insufficient to support elections in a municipality the size of Flint; The State strongly recommends that the City re-establish a Deputy Clerk position and, if possible, convert at least one of the shared staff positions to a full-time position, 100% assigned to election-related duties.
- If it is possible to add staff as recommended, the State recommends developing a more formal structure for specialty areas for assigned staff; especially with respect to training and communications.
- The re-establishment of a Deputy Clerk position would allow for additional focused improvements to be made in the overall organization of the office and additional delegation of administrative duties to staff; which, in turn would further improve the entire staff's ability to handle all required duties in a more proactive manner.

Candidate Filings

The Clerk's practice of preparing instructional packets for city office candidates is one that is practiced by many other municipalities. The content of these packets is obviously critical and should be informative, yet brief and easy to follow. The problem that occurred this year involved a single staff member that inaccurately calculated the filing deadline date – and the lack of review by others in the office of this critical piece of information. Flint's candidate packets for this year utilized appropriate petition forms, which were updated in early 2015. Flint staff review the packets with candidates as the packets are issued. Flint's procedure for processing candidate filings follows State guidelines and they appropriately utilize the QVF system for verifying petitions.

RECOMMENDATIONS – Candidate Filings:

- PA 43 of 2015 requires the City Clerk to submit city election filing information, calendars and petition forms for approval to the Secretary of State through the end of 2017.
- The City Clerk's office should establish and document the process for developing candidate information packets; in addition to the staff person that develops the information packet, procedures should include review by at least two other staff in the office.
- The Bureau of Elections regularly publishes *Key Dates and Deadlines* calendars for every election. These calendars are typically made available during the last quarter of the calendar year for the next upcoming election year. The developer of the city's candidate information packet should confirm key dates by referencing the BOE-published calendar. If candidate packets are prepared prior to the availability of the BOE calendars, Flint staff should confer with BOE and receive verification of the filing deadline in writing. Candidate packets should be kept as simple as possible.

QVF / Data Maintenance / AV Processing

QVF processing (including ongoing data maintenance) is handled by the two full-time permanent staff members. They appear to have an appropriate use and overall understanding of key voter registration and QVF processes. BOE staff reviewed the current status of Flint's portion of the State QVF and found that Flint appears to be conducting regular data maintenance (e.g., over 2,000 voters have been sent confirmation notices and are in the cancellation countdown process required by the National Voter Registration Act).

Absent Voter ballot processing: Flint does not utilize a permanent AV list. All staff (including shared staff) handle AV ballot requests and intake of voted AV ballots. Flint uses the QVF AV ballot tracker feature as required, which provides online updates to voters that AV ballots have been issued and received back from voters. It should be noted that Flint has continual issues with candidates and others submitting numerous AV applications, apparently in violation of State law. The Flint City Clerk regularly communicates with BOE on these issues and has developed a structured process for obtaining the identity of individuals submitting AV applications in bulk, reminding these individuals of the legal requirements and referring individuals to local law enforcement when there is evidence of possible law violations.

RECOMMENDATIONS – QVF / Data Maintenance / AV Processing:

- Processes appear sound.

- BOE will conduct a detailed review with Flint staff on all required data maintenance tasks (as we are doing with other jurisdictions).
- Flint should continue current practices with respect to handling suspected violations of AV ballot application requirements by certain individuals. Note that use of a Permanent AV list may assist with further ensuring the integrity of the AV application process.

Electronic Pollbook (EPB)

While Flint planned to begin using the EPB program in 2014, it had not implemented this program prior to August 2015. The State highly recommends use of the EPB program, as it has proven to be effective in speeding up processing on Election Day, reducing costs and increasing accuracy in assigning proper ballots to voters and recording voter history.

BOE recognizes that fully implementing EPB in a municipality the size of Flint is a large undertaking that must be approached carefully; specialized and targeted training is also required. BOE worked with Flint to pilot the EPB program in one precinct for the August primary. The program operated smoothly in that precinct.

RECOMMENDATIONS - EPB:

- BOE will continue to work with Flint on continued gradual expansion of the EPB program, which will include development of a detailed rollout and training plan for additional expansion in November 2015 and full EPB use city-wide in 2016.

Precincts / Polling Places

The City of Flint currently has 61 precincts. Although the structure seems to have been developed primarily to avoid the possibility of split precincts (e.g., in some elections, more than one ballot style would be required in a precinct with multiple county commissioner districts), the current structure is inefficient and contains several precincts with smaller than desired numbers. By law, an individual precinct can have no more than 2,999 active voters. For example, in Flint there is one precinct with 0 voters (apparently established because of a future planned residential development) and three precincts with less than 300 voters.

Flint's precinct structure is also challenging due to a State House split and unusually-constructed county commissioner district boundaries that conflict with City Ward boundaries. Of Flint's 26 polling locations, 19 house multiple precincts. Although temporary precinct consolidations are allowed in non-statewide elections, the Clerk and her staff are not in favor of changing the precinct structure temporarily in odd years due to the of steps needed to change the structure from year to year, and the possible need to communicate those changes to the city's voters in the odd year.

The City of Flint has also faced ongoing challenges due to the occasional closure of schools that also act as polling locations, creating an ongoing problem for the Clerk's office in finding and establishing new locations and communicating these changes to voters. Just this year, three schools that were previously polling places have closed.

RECOMMENDATIONS - Precincts / Polling Places:

- The Bureau of Elections recommends a significant effort toward permanently consolidating Flint's precincts. We have conducted an analysis of the current precinct structure and believe a model can be successfully pursued that would result in 40-45 precincts, as opposed to the current 61-precinct structure. Permanently consolidating precincts in many of the current polling locations that house multiple precincts is a logical step that should be easy to implement.
- Decreasing the number of precincts will help to alleviate problems with respect to having adequate numbers of pollworkers, equipment testing, AVCB processing timeframes and overall costs. Making these changes will entail additional training (and assignment of more experienced workers/chairpersons) in the few precincts that will now have occasional ballot splits. In addition, with implementation of the EPB city-wide, identification of the proper ballot style for each voter is simplified and easily identified by the program. The Bureau of Elections stands ready to assist the city in planning for and implementing these changes.
- BOE further recommends that the city consider temporary precinct consolidations in odd-year elections. Although employing a different precinct structure in the odd year will require changes to precinct kits and materials and a clear communication plan for voters, a step-by-step process template for implementing these changes can be developed that will allow for temporary consolidations in odd years to work smoothly. Use of temporary precinct consolidations in the odd year for city elections will also further cut costs and processing timeframes on Election Day.
- In the long-term (with the next redistricting cycle), BOE recommends that Genesee County consider changes to the current County Commission boundaries, to better coincide with the city's ward and precinct structure.

Polling Place Accessibility

Flint also faces challenges with respect to the accessibility of its current polling locations. Substantial Federal funding has been available since 2003 to cover the costs of needed structural improvements to polling places, to ensure full access to these facilities for voters with disabilities. Over the last few years, the city has come under the scrutiny of the U.S. Department of Justice because of complaints and concerns relating to polling place accessibility.

Prior to 2014, Flint utilized the available Federal grant program to complete improvements in only three polling locations. Starting in 2013, a dedicated BOE staff specialist provided direct assistance to Flint to assess polling locations, identify needed accessibility improvements and to develop and submit Federal grant funding requests to complete those identified changes. Due to these efforts, accessibility improvements have been completed in an additional 11 locations. Based on our assessments, there are still 11 additional locations that are in need of similar improvements.

While Federal grant funding has been available for several years, this program is reaching its end, and it is unlikely that these funds will be available to cover the costs of the remaining needed changes. Per Federal and State law, polling places must be fully accessible to voters

with disabilities, and Flint has an ongoing requirement to continue to identify needed changes and make these improvements, even if Federal funding is no longer available.

RECOMMENDATIONS - Polling Place Accessibility

- Flint must complete full accessibility assessments for any remaining polling location without a recent assessment on file (within the last five years). These assessments must be completed no later than March 2016.
- A plan must be developed to complete all identified needed changes in 2016. If Federal funding is no longer available, these plans must include plans for providing city funding.

Precinct Inspectors / Training / Precinct Materials

The training of precinct inspectors is critical to ensuring a smooth Election Day. Flint's pre-election training programs consist of numerous training sessions, and targeted training for specific groups (e.g., new election inspectors, experienced election inspectors, precinct chairpersons, Absent Voter Counting Board members and Receiving Board members). This is a logical approach to structuring training that is also used in other jurisdictions.

Over the past couple of years, the Clerk's office has begun to conduct detailed reviews and analyses after each election. These reviews occur precinct by precinct and identify Election Day mistakes and issues, including the inspectors/teams from each precinct. The Clerk has utilized this data to identify precinct teams that may need additional training or reassignment, or should be relieved of their duties. The data is also used to develop targeted training and hands-on sessions focusing on the topics that seem to be most problematic. These efforts are commended and should continue.

Prior to the August 4, 2015 Flint city primary, the Clerk's office scheduled 12 different training sessions. The sessions began in mid-July with an overall 'all workers' session that all inspectors were expected to attend. From there, the specialized group sessions began, with 2-3 sessions per group. All sessions generally followed a similar format, with both full group presentations and breakout sessions with hands-on exercises, focusing on a limited number of topics (typically, those issues most commonly identified by the post-election analyses, such as sealing ballot containers and completing end of night ballot summaries). BOE training staff attended these sessions and provided ongoing assistance and feedback to the Clerk throughout the process. At the final sessions that were conducted the week before Election Day, BOE training specialists also presented a structured session for each group that covered all key Election Day issues.

While the overall training schedule was established several weeks in advance of the primary, the format and structure for each individual training session was not planned extensively in advance. Several members of the Clerk's staff participated and presented at the various sessions, but the presentations generally consisted of a quick review of reminders, followed by break-out and hands-on type sessions that were more casual in nature. Decisions with respect to the overall training plan and the agenda/topics to be covered in each session seemed to be handled exclusively by the Clerk.

Flint has developed a series of job aids for their precinct inspectors, AVCB inspectors and Receiving Board members that provide step-by-step instructions covering each group's particular duties. The materials provided to the precinct inspectors include separate, color-coded instructions and reminders for opening the polls, closing the polls and delivery of precinct materials to the Receiving Board. These materials are well-structured for their purpose and seem to be well-used by the inspectors.

Flint continually struggles to recruit inspectors from both major political parties. The Clerk has increased her efforts to reach out to Republican Party officials in her area to obtain additional inspectors from this party to maintain the required political balance in each precinct.

RECOMMENDATIONS - Precinct Inspectors / Training / Precinct Materials:

- BOE supports the continued practice of conducting targeted training sessions for specialized groups (new inspectors, experienced inspectors, chairpersons, AVCB inspectors and Receiving Board members). As use of the Electronic Pollbook is further expanded, EPB inspectors should be added as a new specific training group.
- There was some confusion as to whether inspectors needed to attend a single training session or all identified sessions for their particular group. While it is reasonable to offer multiple training sessions for each group to allow for flexibility for inspectors' schedules, a specific agenda and topics should be developed for each session prior to the scheduled training, with clear direction to participants on which portions they need to attend.
- Attendance should be tracked, with follow-up for any non-attendees.
- The structure and format for each session should be established by the way of a standard reusable training template, utilizing a group presentation which includes a display (e.g., power point), handouts, and structured presentations by staff. BOE has provided template training presentations that can be utilized (and modified to meet Flint's specific needs) for new inspectors, experienced inspectors and chairpersons.
- All key Election Day processing steps should be regularly covered and reinforced - not just the most common problem issues. Exceptions and most commonly-missed items should also be highlighted, but in a structured presentation style – all that include time for group interaction and a question/answer period.
- Hands-on sessions should continue to be offered at the conclusion of the standard training presentations, as well as in a 'lab' or 'drop in' type mode currently offered by the Clerk's office.
- BOE strongly recommends that a dedicated staff person be established as a single point of contact in the office for training purposes. This person would be responsible for finalizing a reusable training template (for each specialized group), as well as the overall training schedule prior to each election and the specific training plans for each session. This resource would develop the full plan for each election cycle several weeks prior to the conduct of training – for approval by the Clerk.
- The Clerk should continue the practice of tracking specific types of problem issues that occur in each election, include reinforcement on those key points in subsequent training sessions and follow up with specific teams and inspectors as warranted.

- It should be noted that PA 43 of 2015 also requires the city's precinct inspectors to attend county-based training sessions in 2016 and 2017. BOE recommends that Flint continue to offer their regular targeted group training sessions in these years as well.
- The Clerk should continue to seek out and recruit inspectors that provide partisan balance (e.g., working with Republican Party officials in the area – even outside of Genesee County and/or at State level). The Clerk and her staff should also continue to seek out younger workers (e.g., high school and college students), who may be more adept at using the EPB program. The Clerk should also continue to mentor and encourage inspectors who show leadership potential to serve as precinct chairpersons in the future.

Absent Voter Counting Boards (AVCBs)

Over the past couple of years, the most notable problems in Flint's election process have involved the overall process and timeliness for completing Absent Voter Counting Board duties. AVCBs are used in many large jurisdictions to process all absent voter ballots in one location. The overall process and steps involved in completing Election Day tabulation in AVCBs are specialized and differ from in-person Election Day precincts.

Similar to the analysis conducted on Election Day precincts (mentioned above), Flint has similarly studied their AVCB operation and has recently made several positive structural changes. Earlier this year, Flint collaborated with other local clerks in the county to share AVCB best practices and develop a standardized model for AVCB processing. This was also a very positive step. Flint has used the new process in the past two elections which seems to have performed well, improved timeframes for completing AVCB processes on Election Night, and reduced incidences of problems.

RECOMMENDATIONS - Absent Voter Counting Boards (AVCBs):

- Flint should continue the use of the new countywide AVCB model and should continue the expansion of the number of teams employed to work in the AVCB. Flint should move towards the utilization of seven full AVCB teams, each working with one pollbook and tabulator. For the August 4 primary, only two teams were used, but in November, seven teams are planned. Use of additional AVCB teams will ensure more timely completion of AVCB duties on election night, but may also require additional training/support of additional inspectors that have not yet worked the new process.
- Flint should continue to use the countywide AVCB processing model, but should customize the instructions to create a Flint-specific training and instructional document for Flint's AVCB inspectors. Using this customized document, a Flint-specific AVCB training template and presentation should also be developed.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure more timely completion of the AVCB process in Flint, with fewer problems in completing and balancing each AVCB precinct.

Receiving Boards (RBs)

In recent years, some Election Day problems have occurred in Flint due to the inconsistent use of Receiving Boards. These boards, now mandated for use in every election, involve use of specialized precinct inspectors that receive materials from each precinct on Election Night,

confirm that ballot containers are properly sealed, and ensure that all materials are present and in balance and are delivered to the appropriate parties. These procedures prove to be very effective in ensuring a smooth canvass and election certification at the county level. In addition, the law mandates specific steps be used by Receiving Board inspectors, which cover all criteria used to declare a precinct recountable - therefore, greatly increasing the likelihood that all precincts can be recounted if necessary.

Over the past couple of years, Flint has developed a structured RB process, which includes a check-in table; 8-10, two-person RB teams; and a designated 'Problem Table' to focus in and resolve any precinct that appears to have problems. The RB training session included structured checklists, presentations by experienced RB members and sample materials with guidelines on precinct items that must be verified. This is a logical structure that seems to be working well.

The County Canvass process for the August 4 primary went very smoothly. One problem was identified (and resolved) that should have been caught by the RB teams, but the Canvassers reported that this past election was one of the best performed in recent memory.

RECOMMENDATIONS - Receiving Boards (RBs):

- Flint's revised RB process appears sound. This seems to be a well-working model that has helped to uncover and rectify problem issues while they can still be resolved. It is also appropriately used with the AVCB, which has been a main source of issues in the past.
- An overall lead worker should be assigned to oversee and study the Flint RB model, to help ensure that all problems are being identified and resolved and that the large number of precinct arrivals are moving fluidly through the system.
- Dedicated, experienced RB teams should be assigned to handle AVCB precincts as they arrive, to further ensure timely completion of the AVCB process and delivery to the county.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure fewer problems in Flint's Receiving Boards.

Working Relationship with County

Although not a specific point of review within the administrative audit, it should be noted that a clear conflict exists between the Genesee County Clerk and Flint City Clerk. Both parties express a high level of frustration, resentment and distrust of the other – which is extremely unfortunate and counterproductive to running problem-free elections. While there are experienced and hard-working staff in both offices, this negative relationship between the Clerks poses extreme challenges to running any election smoothly in Flint. The election administration responsibilities between the County and City differ, but these two entities must work together in every election.

There have been a number of instances where critical comments were made via the local media, some even on Election Day. The Bureau of Elections strongly recommends that the Clerks refrain from these types of actions, allow their staff to work productively and professionally together, and to set their differences aside when it comes to completing the

necessary steps prior to the election, on Election Day and through each election's canvass and final election certification. The Bureau further recommends that the Clerks refrain from airing differences publicly.

Overall Summary, Conclusions & Next Steps

Although a number of problem issues have been uncovered after recent elections in Flint, the Flint City Clerk and her staff are dedicated to studying their operations and are working to eliminate the source of possible mistakes; a challenge in a large jurisdiction with a small staff and hundreds of precinct inspectors. Several strengths are present which can be built upon, including:

- An experienced core staff with a strong overall grasp of election-related procedures and requirements;
- Experienced precinct chairpersons and inspectors who share the Clerk's goal to ensure problem-free elections;
- Targeted training programs that reinforce issues that are identified in post-election analyses;
- Revised Absent Voter Counting Board processes which have incorporated best practices of other jurisdictions and has already proven to streamline Flint's overall AVCB operation; and
- A renewed focus on the importance of the Receiving Board process and the final checks on Election Day to ensure recountability and a smooth county canvass.

In any organization with large and complex responsibilities, opportunities for improvements exist. The Bureau of Elections recommends a structured plan of action for implementing the recommendations offered in this report, with a primary focus on:

- Securing additional full-time election staff and a Deputy Clerk in the City of Flint;
- Detailed evaluation and consolidation of the current precinct structure (decreasing the number of precincts);
- Completing accessibility improvements in all polling locations;
- Development of formal procedures for compiling and reviewing key information distributed by the Clerk's office (e.g., filing deadlines and candidate packets); as well as data maintenance tasks (a BOE focus statewide);
- Continued development of a formal, reusable training template, along with a dedicated staff resource for developing the training plan prior to every election; and
- Gradual expansion of the use of the Electronic Pollbook city-wide.

The Bureau of Elections will continue to work with the Flint City Clerk and her staff to assist with preparations for the city's November 3, 2015 general election, to fulfill the remaining requirements of PA 43 of 2015 and to assist with implementing (where possible) the recommendations presented in this report.

Governor Rick Snyder
October 2, 2015
Daily Briefing

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Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
  - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
  - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
  - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
  - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
  - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
  - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
  - We encourage anyone with a concern to get their water tested.
  - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**
  - A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
  - This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
  - If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
    - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
    - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
    - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
    - This is a problem in communities statewide, and one we want to address with a long-term solution.
    - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
    - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
    - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
    -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
    - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.
    - She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
    - Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
    - As an additional precaution, water filters will be available to low-income families.
    - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
    - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
    - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.

        - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
        - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
    - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

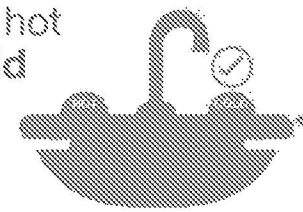
2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 1 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not been used recently.

If the City of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



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TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater.
State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

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Oct. 1, 2015

Michigan leaders to announce action plan for Flint drinking water

Friday, Oct. 2 at 1:30 p.m.
Local, state and federal leaders will host a press conference to announce a comprehensive action plan for addressing drinking water concerns in Flint. Participants will include:

- Harvey Hollins, Director of the Office of Urban Initiatives for Gov. Rick Snyder
- Dan Wyant, Director for the Michigan Department of Environmental Quality
- Nick Lyon, Director for the Michigan Department of Health and Human Services
- Dr. Eden Wells, Chief Medical Executive for the Michigan Department of Health and Human Services
- Dayne Walling, Mayor of Flint
- Other local, state and federal officials

Location:
Kettering University, Innovation Center
1300 Bluff St.
Flint, MI 48504

This is a media event open to credentialed news media only. Media who plan to attend this event should RSVP by noon Friday. Contact Rosemarie Olszewski at 517-284-6700 or olszewskir@michigan.gov.

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

October 1, 2015

Senate Elections and Government Reform Committee
House Elections Committee

Dear Honorable Members:

Attached is a comprehensive report that covers the results of the Secretary of State's Administrative Audit of the City of Flint's Elections Operations. As you know, this audit and report are required by Public Act 43 of 2015, which allowed the City of Flint to move forward with a city primary on August 4, 2015. The report covers several categories, with findings and recommendations for each.

The Bureau of Elections continues to work closely with the City of Flint to prepare for the city general election scheduled for November 3, 2015. If you have questions or need additional information, please contact Christopher Thomas, Michigan Director of Elections. Thank you.

Sincerely,

Ruth A. Johnson
Secretary of State

Attachment

RICHARD H. AUSTIN BUILDING • 4TH FLOOR • 430 W. ALLEGAN • LANSING, MICHIGAN 48918

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STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

FINDINGS AND RECOMMENDATIONS: ADMINISTRATIVE AUDIT OF THE CITY OF FLINT ELECTIONS OPERATIONS

October 2015

Background

Elections for the Mayor and select City Council positions in the City of Flint were scheduled to occur in 2015, with an August 4, 2015 primary and November 3, 2015 general election. In early 2015, the Flint City Clerk's office provided instructional packets to potential city office candidates which explained the filing deadline and process, along with other key steps related to the city election. Unfortunately, the information provided included an inaccurate candidate filing deadline. The mandated filing deadline for city offices in 2015 was 4:00 p.m. on April 21; the deadline published by the Clerk's office was 4:00 p.m. on April 28. The discrepancy was not discovered until after the April 21 deadline. Only one candidate filed timely by that deadline, and that filing was found to be insufficient, with petitions containing fewer than the required number of registered voter signatures. Several other candidates relied on the erroneous information and filed by the published April 28 deadline, but were unable to be certified for the ballot due to missing the true filing deadline. Due to these issues, the City of Flint was not scheduled to hold an August primary, and the only option for city office candidates would be to run as write-in candidates at the November 3, 2015 city general election.

As a result of this problem, the Michigan State legislature enacted Public Act 43 of 2015, which allowed the city nominating petition filing deadline in this case to be adjusted to the erroneously-published date. The law further established several other follow-up requirements, including the conduct of an administrative audit of the City Clerk's elections operations by the Secretary of State. This report summarizes the steps taken by the Secretary of State, Bureau of Elections (BOE) to conduct this administrative audit, including overall findings and recommendations.

Scope

On June 24, 2015, Bureau of Elections staff met with the Flint City Clerk and her staff to conduct the administrative audit. The meeting included detailed discussions and review of the city's election-related processes and materials, including:

- Staffing roles and responsibilities
- Candidate filings
- Utilization of State-issued training manuals, reference materials and communications

- Use of the Qualified Voter File (QVF) and Electronic Pollbook (EPB) programs
- Precinct and polling place structure
- Precinct Inspectors and training programs
- Absent Voter (AV) ballot issuance procedures and use of Absent Voter Counting Boards (AVCBs) on Election Day
- Election-related forms and supplies and Election Day precinct kit materials
- Use of Receiving Boards (RBs) on Election Day
- Prior election-related issues and problems

In addition, the Bureau of Elections worked collaboratively with the Clerk's office to plan for, attend and conduct several precinct inspector training sessions prior to the August 4, 2015 city primary. BOE staff also attended the Genesee County Board of Canvassers' meeting on August 5, 2015, where Flint's primary election results were certified.

Findings and Recommendations

The following information summarizes the Bureau of Elections' overall findings and recommendations with respect to the review of the City of Flint's elections operations:

Staffing

Staffing in the Flint City Clerk's elections division includes the Clerk and two full-time staff. A Deputy Clerk position was eliminated several years ago, leaving the Clerk to become solely responsible for the overall office organization and many of the day-to-day administrative duties. Three additional staff are available to assist during key election timeframes (prior to and up to Election Day). These staff members are shared with the city's business licensing area.

The full-time and shared staff all have several years of experience working in elections and have a good overall understanding of the key areas of election administration. The full-time staff are cross-trained to handle all major duties. The shared staff assist in conducting precinct inspector training, assisting walk-in customers during key election timeframes (e.g., absent voter ballot requests) and a variety of other duties to prepare for Election Day.

RECOMMENDATIONS - Staffing:

- Two full-time staff are insufficient to support elections in a municipality the size of Flint; The State strongly recommends that the City re-establish a Deputy Clerk position and, if possible, convert at least one of the shared staff positions to a full-time position, 100% assigned to election-related duties.
- If it is possible to add staff as recommended, the State recommends developing a more formal structure for specialty areas for assigned staff; especially with respect to training and communications.
- The re-establishment of a Deputy Clerk position would allow for additional focused improvements to be made in the overall organization of the office and additional delegation of administrative duties to staff; which, in turn would further improve the entire staff's ability to handle all required duties in a more proactive manner.

Candidate Filings

The Clerk's practice of preparing instructional packets for city office candidates is one that is practiced by many other municipalities. The content of these packets is obviously critical and should be informative, yet brief and easy to follow. The problem that occurred this year involved a single staff member that inaccurately calculated the filing deadline date – and the lack of review by others in the office of this critical piece of information. Flint's candidate packets for this year utilized appropriate petition forms, which were updated in early 2015. Flint staff review the packets with candidates as the packets are issued. Flint's procedure for processing candidate filings follows State guidelines and they appropriately utilize the QVF system for verifying petitions.

RECOMMENDATIONS – Candidate Filings:

- PA 43 of 2015 requires the City Clerk to submit city election filing information, calendars and petition forms for approval to the Secretary of State through the end of 2017.
- The City Clerk's office should establish and document the process for developing candidate information packets; in addition to the staff person that develops the information packet, procedures should include review by at least two other staff in the office.
- The Bureau of Elections regularly publishes *Key Dates and Deadlines* calendars for every election. These calendars are typically made available during the last quarter of the calendar year for the next upcoming election year. The developer of the city's candidate information packet should confirm key dates by referencing the BOE-published calendar. If candidate packets are prepared prior to the availability of the BOE calendars, Flint staff should confer with BOE and receive verification of the filing deadline in writing. Candidate packets should be kept as simple as possible.

QVF / Data Maintenance / AV Processing

QVF processing (including ongoing data maintenance) is handled by the two full-time permanent staff members. They appear to have an appropriate use and overall understanding of key voter registration and QVF processes. BOE staff reviewed the current status of Flint's portion of the State QVF and found that Flint appears to be conducting regular data maintenance (e.g., over 2,000 voters have been sent confirmation notices and are in the cancellation countdown process required by the National Voter Registration Act).

Absent Voter ballot processing: Flint does not utilize a permanent AV list. All staff (including shared staff) handle AV ballot requests and intake of voted AV ballots. Flint uses the QVF AV ballot tracker feature as required, which provides online updates to voters that AV ballots have been issued and received back from voters. It should be noted that Flint has continual issues with candidates and others submitting numerous AV applications, apparently in violation of State law. The Flint City Clerk regularly communicates with BOE on these issues and has developed a structured process for obtaining the identity of individuals submitting AV applications in bulk, reminding these individuals of the legal requirements and referring individuals to local law enforcement when there is evidence of possible law violations.

RECOMMENDATIONS – QVF / Data Maintenance / AV Processing:

- Processes appear sound.

- BOE will conduct a detailed review with Flint staff on all required data maintenance tasks (as we are doing with other jurisdictions).
- Flint should continue current practices with respect to handling suspected violations of AV ballot application requirements by certain individuals. Note that use of a Permanent AV list may assist with further ensuring the integrity of the AV application process.

Electronic Pollbook (EPB)

While Flint planned to begin using the EPB program in 2014, it had not implemented this program prior to August 2015. The State highly recommends use of the EPB program, as it has proven to be effective in speeding up processing on Election Day, reducing costs and increasing accuracy in assigning proper ballots to voters and recording voter history.

BOE recognizes that fully implementing EPB in a municipality the size of Flint is a large undertaking that must be approached carefully; specialized and targeted training is also required. BOE worked with Flint to pilot the EPB program in one precinct for the August primary. The program operated smoothly in that precinct.

RECOMMENDATIONS - EPB:

- BOE will continue to work with Flint on continued gradual expansion of the EPB program, which will include development of a detailed rollout and training plan for additional expansion in November 2015 and full EPB use city-wide in 2016.

Precincts / Polling Places

The City of Flint currently has 61 precincts. Although the structure seems to have been developed primarily to avoid the possibility of split precincts (e.g., in some elections, more than one ballot style would be required in a precinct with multiple county commissioner districts), the current structure is inefficient and contains several precincts with smaller than desired numbers. By law, an individual precinct can have no more than 2,999 active voters. For example, in Flint there is one precinct with 0 voters (apparently established because of a future planned residential development) and three precincts with less than 300 voters.

Flint's precinct structure is also challenging due to a State House split and unusually-constructed county commissioner district boundaries that conflict with City Ward boundaries. Of Flint's 26 polling locations, 19 house multiple precincts. Although temporary precinct consolidations are allowed in non-statewide elections, the Clerk and her staff are not in favor of changing the precinct structure temporarily in odd years due to the of steps needed to change the structure from year to year, and the possible need to communicate those changes to the city's voters in the odd year.

The City of Flint has also faced ongoing challenges due to the occasional closure of schools that also act as polling locations, creating an ongoing problem for the Clerk's office in finding and establishing new locations and communicating these changes to voters. Just this year, three schools that were previously polling places have closed.

RECOMMENDATIONS - Precincts / Polling Places:

- The Bureau of Elections recommends a significant effort toward permanently consolidating Flint's precincts. We have conducted an analysis of the current precinct structure and believe a model can be successfully pursued that would result in 40-45 precincts, as opposed to the current 61-precinct structure. Permanently consolidating precincts in many of the current polling locations that house multiple precincts is a logical step that should be easy to implement.
- Decreasing the number of precincts will help to alleviate problems with respect to having adequate numbers of pollworkers, equipment testing, AVCB processing timeframes and overall costs. Making these changes will entail additional training (and assignment of more experienced workers/chairpersons) in the few precincts that will now have occasional ballot splits. In addition, with implementation of the EPB city-wide, identification of the proper ballot style for each voter is simplified and easily identified by the program. The Bureau of Elections stands ready to assist the city in planning for and implementing these changes.
- BOE further recommends that the city consider temporary precinct consolidations in odd-year elections. Although employing a different precinct structure in the odd year will require changes to precinct kits and materials and a clear communication plan for voters, a step-by-step process template for implementing these changes can be developed that will allow for temporary consolidations in odd years to work smoothly. Use of temporary precinct consolidations in the odd year for city elections will also further cut costs and processing timeframes on Election Day.
- In the long-term (with the next redistricting cycle), BOE recommends that Genesee County consider changes to the current County Commission boundaries, to better coincide with the city's ward and precinct structure.

Polling Place Accessibility

Flint also faces challenges with respect to the accessibility of its current polling locations. Substantial Federal funding has been available since 2003 to cover the costs of needed structural improvements to polling places, to ensure full access to these facilities for voters with disabilities. Over the last few years, the city has come under the scrutiny of the U.S. Department of Justice because of complaints and concerns relating to polling place accessibility.

Prior to 2014, Flint utilized the available Federal grant program to complete improvements in only three polling locations. Starting in 2013, a dedicated BOE staff specialist provided direct assistance to Flint to assess polling locations, identify needed accessibility improvements and to develop and submit Federal grant funding requests to complete those identified changes. Due to these efforts, accessibility improvements have been completed in an additional 11 locations. Based on our assessments, there are still 11 additional locations that are in need of similar improvements.

While Federal grant funding has been available for several years, this program is reaching its end, and it is unlikely that these funds will be available to cover the costs of the remaining needed changes. Per Federal and State law, polling places must be fully accessible to voters

with disabilities, and Flint has an ongoing requirement to continue to identify needed changes and make these improvements, even if Federal funding is no longer available.

RECOMMENDATIONS - Polling Place Accessibility

- Flint must complete full accessibility assessments for any remaining polling location without a recent assessment on file (within the last five years). These assessments must be completed no later than March 2016.
- A plan must be developed to complete all identified needed changes in 2016. If Federal funding is no longer available, these plans must include plans for providing city funding.

Precinct Inspectors / Training / Precinct Materials

The training of precinct inspectors is critical to ensuring a smooth Election Day. Flint's pre-election training programs consist of numerous training sessions, and targeted training for specific groups (e.g., new election inspectors, experienced election inspectors, precinct chairpersons, Absent Voter Counting Board members and Receiving Board members). This is a logical approach to structuring training that is also used in other jurisdictions.

Over the past couple of years, the Clerk's office has begun to conduct detailed reviews and analyses after each election. These reviews occur precinct by precinct and identify Election Day mistakes and issues, including the inspectors/teams from each precinct. The Clerk has utilized this data to identify precinct teams that may need additional training or reassignment, or should be relieved of their duties. The data is also used to develop targeted training and hands-on sessions focusing on the topics that seem to be most problematic. These efforts are commended and should continue.

Prior to the August 4, 2015 Flint city primary, the Clerk's office scheduled 12 different training sessions. The sessions began in mid-July with an overall 'all workers' session that all inspectors were expected to attend. From there, the specialized group sessions began, with 2-3 sessions per group. All sessions generally followed a similar format, with both full group presentations and breakout sessions with hands-on exercises, focusing on a limited number of topics (typically, those issues most commonly identified by the post-election analyses, such as sealing ballot containers and completing end of night ballot summaries). BOE training staff attended these sessions and provided ongoing assistance and feedback to the Clerk throughout the process. At the final sessions that were conducted the week before Election Day, BOE training specialists also presented a structured session for each group that covered all key Election Day issues.

While the overall training schedule was established several weeks in advance of the primary, the format and structure for each individual training session was not planned extensively in advance. Several members of the Clerk's staff participated and presented at the various sessions, but the presentations generally consisted of a quick review of reminders, followed by break-out and hands-on type sessions that were more casual in nature. Decisions with respect to the overall training plan and the agenda/topics to be covered in each session seemed to be handled exclusively by the Clerk.

Flint has developed a series of job aids for their precinct inspectors, AVCB inspectors and Receiving Board members that provide step-by-step instructions covering each group's particular duties. The materials provided to the precinct inspectors include separate, color-coded instructions and reminders for opening the polls, closing the polls and delivery of precinct materials to the Receiving Board. These materials are well-structured for their purpose and seem to be well-used by the inspectors.

Flint continually struggles to recruit inspectors from both major political parties. The Clerk has increased her efforts to reach out to Republican Party officials in her area to obtain additional inspectors from this party to maintain the required political balance in each precinct.

RECOMMENDATIONS - Precinct Inspectors / Training / Precinct Materials:

- BOE supports the continued practice of conducting targeted training sessions for specialized groups (new inspectors, experienced inspectors, chairpersons, AVCB inspectors and Receiving Board members). As use of the Electronic Pollbook is further expanded, EPB inspectors should be added as a new specific training group.
- There was some confusion as to whether inspectors needed to attend a single training session or all identified sessions for their particular group. While it is reasonable to offer multiple training sessions for each group to allow for flexibility for inspectors' schedules, a specific agenda and topics should be developed for each session prior to the scheduled training, with clear direction to participants on which portions they need to attend.
- Attendance should be tracked, with follow-up for any non-attendees.
- The structure and format for each session should be established by the way of a standard reusable training template, utilizing a group presentation which includes a display (e.g., power point), handouts, and structured presentations by staff. BOE has provided template training presentations that can be utilized (and modified to meet Flint's specific needs) for new inspectors, experienced inspectors and chairpersons.
- All key Election Day processing steps should be regularly covered and reinforced - not just the most common problem issues. Exceptions and most commonly-missed items should also be highlighted, but in a structured presentation style – all that include time for group interaction and a question/answer period.
- Hands-on sessions should continue to be offered at the conclusion of the standard training presentations, as well as in a 'lab' or 'drop in' type mode currently offered by the Clerk's office.
- BOE strongly recommends that a dedicated staff person be established as a single point of contact in the office for training purposes. This person would be responsible for finalizing a reusable training template (for each specialized group), as well as the overall training schedule prior to each election and the specific training plans for each session. This resource would develop the full plan for each election cycle several weeks prior to the conduct of training – for approval by the Clerk.
- The Clerk should continue the practice of tracking specific types of problem issues that occur in each election, include reinforcement on those key points in subsequent training sessions and follow up with specific teams and inspectors as warranted.

- It should be noted that PA 43 of 2015 also requires the city's precinct inspectors to attend county-based training sessions in 2016 and 2017. BOE recommends that Flint continue to offer their regular targeted group training sessions in these years as well.
- The Clerk should continue to seek out and recruit inspectors that provide partisan balance (e.g., working with Republican Party officials in the area – even outside of Genesee County and/or at State level). The Clerk and her staff should also continue to seek out younger workers (e.g., high school and college students), who may be more adept at using the EPB program. The Clerk should also continue to mentor and encourage inspectors who show leadership potential to serve as precinct chairpersons in the future.

Absent Voter Counting Boards (AVCBs)

Over the past couple of years, the most notable problems in Flint's election process have involved the overall process and timeliness for completing Absent Voter Counting Board duties. AVCBs are used in many large jurisdictions to process all absent voter ballots in one location. The overall process and steps involved in completing Election Day tabulation in AVCBs are specialized and differ from in-person Election Day precincts.

Similar to the analysis conducted on Election Day precincts (mentioned above), Flint has similarly studied their AVCB operation and has recently made several positive structural changes. Earlier this year, Flint collaborated with other local clerks in the county to share AVCB best practices and develop a standardized model for AVCB processing. This was also a very positive step. Flint has used the new process in the past two elections which seems to have performed well, improved timeframes for completing AVCB processes on Election Night, and reduced incidences of problems.

RECOMMENDATIONS - Absent Voter Counting Boards (AVCBs):

- Flint should continue the use of the new countywide AVCB model and should continue the expansion of the number of teams employed to work in the AVCB. Flint should move towards the utilization of seven full AVCB teams, each working with one pollbook and tabulator. For the August 4 primary, only two teams were used, but in November, seven teams are planned. Use of additional AVCB teams will ensure more timely completion of AVCB duties on election night, but may also require additional training/support of additional inspectors that have not yet worked the new process.
- Flint should continue to use the countywide AVCB processing model, but should customize the instructions to create a Flint-specific training and instructional document for Flint's AVCB inspectors. Using this customized document, a Flint-specific AVCB training template and presentation should also be developed.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure more timely completion of the AVCB process in Flint, with fewer problems in completing and balancing each AVCB precinct.

Receiving Boards (RBs)

In recent years, some Election Day problems have occurred in Flint due to the inconsistent use of Receiving Boards. These boards, now mandated for use in every election, involve use of specialized precinct inspectors that receive materials from each precinct on Election Night,

confirm that ballot containers are properly sealed, and ensure that all materials are present and in balance and are delivered to the appropriate parties. These procedures prove to be very effective in ensuring a smooth canvass and election certification at the county level. In addition, the law mandates specific steps be used by Receiving Board inspectors, which cover all criteria used to declare a precinct recountable - therefore, greatly increasing the likelihood that all precincts can be recounted if necessary.

Over the past couple of years, Flint has developed a structured RB process, which includes a check-in table; 8-10, two-person RB teams; and a designated 'Problem Table' to focus in and resolve any precinct that appears to have problems. The RB training session included structured checklists, presentations by experienced RB members and sample materials with guidelines on precinct items that must be verified. This is a logical structure that seems to be working well.

The County Canvass process for the August 4 primary went very smoothly. One problem was identified (and resolved) that should have been caught by the RB teams, but the Canvassers reported that this past election was one of the best performed in recent memory.

RECOMMENDATIONS - Receiving Boards (RBs):

- Flint's revised RB process appears sound. This seems to be a well-working model that has helped to uncover and rectify problem issues while they can still be resolved. It is also appropriately used with the AVCB, which has been a main source of issues in the past.
- An overall lead worker should be assigned to oversee and study the Flint RB model, to help ensure that all problems are being identified and resolved and that the large number of precinct arrivals are moving fluidly through the system.
- Dedicated, experienced RB teams should be assigned to handle AVCB precincts as they arrive, to further ensure timely completion of the AVCB process and delivery to the county.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure fewer problems in Flint's Receiving Boards.

Working Relationship with County

Although not a specific point of review within the administrative audit, it should be noted that a clear conflict exists between the Genesee County Clerk and Flint City Clerk. Both parties express a high level of frustration, resentment and distrust of the other – which is extremely unfortunate and counterproductive to running problem-free elections. While there are experienced and hard-working staff in both offices, this negative relationship between the Clerks poses extreme challenges to running any election smoothly in Flint. The election administration responsibilities between the County and City differ, but these two entities must work together in every election.

There have been a number of instances where critical comments were made via the local media, some even on Election Day. The Bureau of Elections strongly recommends that the Clerks refrain from these types of actions, allow their staff to work productively and professionally together, and to set their differences aside when it comes to completing the

necessary steps prior to the election, on Election Day and through each election's canvass and final election certification. The Bureau further recommends that the Clerks refrain from airing differences publicly.

Overall Summary, Conclusions & Next Steps

Although a number of problem issues have been uncovered after recent elections in Flint, the Flint City Clerk and her staff are dedicated to studying their operations and are working to eliminate the source of possible mistakes; a challenge in a large jurisdiction with a small staff and hundreds of precinct inspectors. Several strengths are present which can be built upon, including:

- An experienced core staff with a strong overall grasp of election-related procedures and requirements;
- Experienced precinct chairpersons and inspectors who share the Clerk's goal to ensure problem-free elections;
- Targeted training programs that reinforce issues that are identified in post-election analyses;
- Revised Absent Voter Counting Board processes which have incorporated best practices of other jurisdictions and has already proven to streamline Flint's overall AVCB operation; and
- A renewed focus on the importance of the Receiving Board process and the final checks on Election Day to ensure recountability and a smooth county canvass.

In any organization with large and complex responsibilities, opportunities for improvements exist. The Bureau of Elections recommends a structured plan of action for implementing the recommendations offered in this report, with a primary focus on:

- Securing additional full-time election staff and a Deputy Clerk in the City of Flint;
- Detailed evaluation and consolidation of the current precinct structure (decreasing the number of precincts);
- Completing accessibility improvements in all polling locations;
- Development of formal procedures for compiling and reviewing key information distributed by the Clerk's office (e.g., filing deadlines and candidate packets); as well as data maintenance tasks (a BOE focus statewide);
- Continued development of a formal, reusable training template, along with a dedicated staff resource for developing the training plan prior to every election; and
- Gradual expansion of the use of the Electronic Pollbook city-wide.

The Bureau of Elections will continue to work with the Flint City Clerk and her staff to assist with preparations for the city's November 3, 2015 general election, to fulfill the remaining requirements of PA 43 of 2015 and to assist with implementing (where possible) the recommendations presented in this report.

Governor Rick Snyder
October 23, 2015
Daily Briefing

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City of Flint Water
Action Steps for Week of October 19-23

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
1.	Update 2004 letter to EPA	DEQ	Dana DeBruyn	This Action Step has been incorporated as part of the After Action Plan (Action Step #4)
2.	Schedule Flint Water Treatment Plant tour	DEQ and Flint	George Krisztian	Scheduled for 10/23/15 at 11:30 a.m.
3.	Figure out number of samples from schools and child care facilities	DEQ	Jim Sygo Pat Cook Steve Busch	1,300 samples (13 schools and 100 samples per school)
4.	Conduct After Action Plan	DEQ	George Krisztian	Initial meeting scheduled for 10/22/15
5.	Introduce legislative changes to Part 54 of NREPA – Drinking Water Revolving Loan Fund	DEQ, Treasury, and EPA	Maggie Pallone George Krisztian Sonya Butler	Draft language submitted to Maggie Pallone for review
6.	After Action Review Panel	DEQ	Madhu Anderson George Krisztian Karen Tommasulo	Panel created and press release issued on 10/21/15
7.	Staff hiring plan	DEQ	Jim Sygo Maggie Pallone George Krisztian	
8.	$1 million for DEQ Laboratory billing code	DEQ	Maggie Pallone George Krisztian	Billing codes created on 10/21/15
9.	Finalize fiscal year 2017 budget request	DEQ	Maggie Pallone George Krisztian	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
10.	Develop letter to schools	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	This Action Step has been incorporated into Action Step #13
11.	Finalize sampling protocol	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Comments received from EPA's Flint Safe Drinking Water Task Force (Task Force); DEQ staff continuing to finalize protocol
12.	Confirm school sampling logistics	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Logistics have been finalized for the initial sampling scheduled for 10/24/15
13.	Meeting(s) with school staff/management	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	A meeting with the 10 remaining schools is tentatively scheduled for the week of 10/26/15
14.	Meet with DHHS and discuss all lead education material for schools	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting
15.	ODWMA staff observe a DLARA plumbing assessment	DEQ and DLARA	Steve Busch Pat Cook Mike Prysby	Initial plumbing assessment is scheduled for 10/23/15; sampling to occur on 10/24/15
16.	Develop sample form and chain of custody document	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ Laboratory has created a fillable PDF form for use in the school sampling protocol

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
17.	Review corrosion control treatment plan and get any EPA comments	DEQ and EPA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Conference call with EPA held on 10/20/15 to discuss comments
18.	Review construction permit application and issue construction permit for phosphate equipment	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	Construction permit is in process
19.	Review Standby Operation of Flint Water Treatment Plant with city of Flint	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ staff is reviewing and seeking clarification on comments received from EPA's Task Force
20.	Provide city of Flint updated monitoring schedule based on Detroit Water and Sewerage Department (DWSD)/Great Lakes Water Authority (GLWA) service	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
21.	Contact city of Flint and Genesee County Health Department daily for DWSD connection status updates	DEQ, Flint, and Genesee County Health Department	Jim Sygo Steve Busch Pat Cook Mike Prysby	Switch to DWSD completed on 10/16/15; city of Flint will let DEQ know if they run into any unforeseen issues
22.	Work with Karegnondi Water Authority (KWA) and other agencies to address bottleneck issues	DEQ and KWA	Jim Sygo Steve Busch Pat Cook Mike Prysby	Monitoring letter expected to be mailed on 10/22/15
23.	Verify city of Flint distribution operations under DWSD/GLWA service	DEQ	Jim Sygo Steve Busch Pat Cook Mike Prysby	

Step No.	Action Step	Involved Parties	DEQ Point(s) of Contact	Status
24.	Contact city of Flint for Service Line Record status update and obtain a copy of the records to date	DEQ and Flint	Jim Sygo Steve Busch Pat Cook Mike Prysby	
25.	Provide DHHS with any available cross-reference information	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	
26.	Develop childcare facility guidance or review DHHS related materials	DEQ and DHHS	Jim Sygo Steve Busch Pat Cook Mike Prysby	DEQ has contacted DHHS to schedule a meeting

Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

- The initial meeting for the internal After Action Plan is scheduled for October 22. The purpose of the meeting is to define the scope of the internal review, create a detailed time line, connect all communications together to determine where communications could have been improved, and create a list of lessons learned and action steps moving forward.

- Madhu Anderson has provided information for the creation of an external After Action Review Panel. The Panel members have been selected, and a press release was issued by the Governor's office on October 21.

- The DEQ Laboratory, working in conjunction with MDOT's Accounting Services Division, has created the necessary billing codes to allow payment for the lead and copper samples from the city of Flint to be processed.

- The EPA's Flint Safe Drinking Water Task Force (Task Force) has provided comments to staff in the Office of Drinking Water and Municipal Assistance (ODWMA) on the sampling protocol. These comments are being reviewed, and ODWMA staff is continuing to finalize the protocol.

- The logistics for the initial plumbing evaluation and subsequent water sampling have been finalized among staff from DEQ, DLARA, and DHHS. The plumbing inspection is scheduled for Friday, October 23, and the water samples will be taken on Saturday, October 24.

- DEQ staff is responding to comments on the corrosion control proposal made by the EPA's Task Force. DEQ staff is following up on questions raised during the October 20 conference call.

- A monitoring schedule letter is expected to be mailed on October 22. The monitoring schedule addresses the change back to a customer supply of the Great Lakes Water Authority. A final copy of the letter will be attached to tomorrow's update.

Additional Actions:

- At the request of Representative Sheldon Neeley, George Krisztian contacted Carlita Earl, Principal of the Eagle's Nest Academy. Ms. Earl has formally requested that Eagle's Nest Academy receive a plumbing evaluation and water sampling as outlined in the newly-developed school assessment protocol. Ms. Earl was informed that she would be added to the list of schools being evaluated and that the original 13 Flint Community Schools buildings would be

evaluated first and then the DEQ/DLARA/DHHS would expand the evaluation process to charter schools, parochial schools, and other childcare facilities. Ms. Earl was informed that since the Eagle's Nest Academy serves children in grades K-4 that they would be placed at the top of the list once the evaluations of the original 13 buildings are complete.

- Director Dan Wyant, Chief Deputy Director Jim Sygo, and George Krisztian met with a group of pastors and citizens who came to Constitution Hall to voice their concerns regarding the water in Flint. The discussion lasted for approximately one hour, and the topics included a history of events, questions regarding how decisions were made, and the plan moving forward. The group indicated that they had read a great deal in the media and were interested in finding out what DEQ's perspective of the situation was. The questions were tough, but the conversation was very respectful. The group was informed that an independent group external to the DEQ would be conducting an After Action Review, and this information seemed to be well-received.

- Shelly Edgerton of DLARA spoke to Eric Swanson of DTMB, who is going to call Howard Croft, Public Works Director, city of Flint, about the GIS program that the city of Flint is trying to run. Eric will follow up with Shelly after the conversation. In addition, DLARA will be meeting again with the city of Flint.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
October 22, 2015

Governor Rick Snyder
December 22, 2015
Daily Briefing

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Flint Drinking Water Action Plan Update

FOIA EXEMPT AND ATTORNEY-CLIENT PRIVILEGE

Key Actions:

DEQ staff set aside additional time this week to address the backlog of FOIA legislative requests.

A conference call with staff from the DEQ, U.S. Environmental Protection Agency (EPA), and city of Flint was held on December 15, 2015, to discuss the transition to the Karegnondi Water Authority (KWA) as the city's source of drinking water. The EPA indicated that they would provide written recommendations regarding the actions that Flint should take prior to switching to the KWA.

On December 18, 2015, staff from the DEQ and DLARA conducted an initial plumbing evaluation of Flint Community Schools' Northwestern High School and Southwestern Classical Academy. These two schools are scheduled for a final evaluation and subsequent sampling during the week of December 28, 2015. Due to the extracurricular activities that typically take place on the weekends, it was determined that the best time to conduct the sampling would be during the winter school break.

Positions:

There are no new positions to report since last week.

Concern:

On December 16, 2015, the EPA sent an e-mail to Flint City Administrator, Natasha Henderson, outlining the recommended precautionary measures for Flint to implement prior to switching to the KWA for their source water. The list of recommendations is very broad in nature and could potentially costs millions of dollars to implement. In addition, the recommendations could potentially delay the switch to the KWA by several months. Given the costs associated with implementing these measures, the city of Flint will be working to set up a meeting with Harvey Hollins and George Krisztian to discuss funding options, including asking the EPA for assistance.

Significant Event:

The DEQ has assigned Eric Pocan, Office of Drinking Water and Municipal Assistance, to serve as the project manager to assist the city of Flint with providing the documentation necessary for the city to apply for loans under the Drinking Water Revolving Loan Fund. A time line outlining the various steps in the process has been given to the city of Flint to assist them in ensuring that all requisite documents are generated and submitted within the necessary deadlines. Additional follow-up meetings will be held to assist the city with any issues related to the submission of the required documentation.

Changes from Previous Report:

- Final plumbing assessment reports for Pierce Elementary and Doyle/Ryder Elementary Schools are being prepared. Staff from the DEQ, Office of Environmental Assistance, are being trained to assist with the preparation of the reports in order to reduce the turnaround time.

- The MSU Extension provided a release regarding nutrition and lead. The release provides resources for utilizing nutrition to lessen the effects of lead exposure.

- Staff from the DEQ met with staff from the city of Flint on December 18, 2015, to discuss the recommendations made by the EPA earlier in the week. The city expressed concern that EPA's recommendations went beyond the requirements of the Lead and Copper Rule. It was agreed that further discussion needed to occur to determine how these recommendations could be funded.

- Staff from the DEQ met with the Michigan Association for Local Public Health (MALPH). One of the main topics of conversation was the Flint water situation. Members of MALPH expressed concern that the lead exposure issues were not unique to Flint and that, based on the recent article in *Bridge Magazine*, the issue was statewide and there were areas in the state that had significantly high lead exposure levels.

Other Items:

Attached is the EPA's December 16, 2015, e-mail to the city of Flint, including the document entitled, "Task Force Recommendations Regarding Flint Drinking Water Treatment Performance Evaluation."

Attached is the MSU Extension release.

Prepared by: George Krisztian, Flint Action Plan Coordinator
Laboratory Director
Department of Environmental Quality
Telephone: 517-284-6719
[redacted]
December 21, 2015

Shaler, Karen (DEQ)

From: Sygo, Jim (DEQ)
Sent: Wednesday, December 16, 2015 7:49 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Krisztian, George (DEQ)
Subject: Fwd: EPA Flint Drinking Water Task Force Recommendations -- Performance Evaluation Period
Attachments: performance evaluation period 12-16-15 final.pdf; ATT00001.htm

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Kaplan, Robert" <kaplan.robert@epa.gov>
> **Date:** December 16, 2015 at 5:47:22 PM EST
> **To:** Natasha Henderson <nhenderson@cityofflint.com>
> **Cc:** "Sygo, Jim (DEQ)" <SygoJ@michigan.gov>
> **Subject: EPA Flint Drinking Water Task Force Recommendations -- Performance Evaluation Period**
>
> Natasha,
>
> Attached please find the EPA Flint Drinking Water Task Force Recommendations for a Performance Evaluation Period.
>
> As we discussed on December 11 and December 15, it is important to gain operational experience at the Flint Plant prior to distribution of KWA-sourced water. We have informally referred to this as a "shakedown" period for ensuring a safe and appropriate transition to the new water source.
>
> Please feel free to call me if you have any questions. We are pleased to continue to work together.
>
> - Bob
>
> Cc: Jim Sygo, MDEQ

Flint Drinking Water Task Force (FTF 15-5)

Task Force Recommendations Regarding Flint Drinking Water Treatment Performance Evaluation

For protection of public health, Flint must avoid significant distribution system issues similar to those experienced following the source water switch to the Flint River and subsequent operation of Flint's water treatment plant.

The EPA Flint Safe Drinking Water Task Force recommends that Flint develop and implement a Performance Assessment Plan prior to distribution of water from the Karegnondi Water Authority (KWA) source. The plan must address how the treatment plant will be brought on-line, and how finished drinking water will be introduced to the distribution system. This plan is particularly important given the City has no experience treating the KWA-supplied water, and is operating a distribution system that is still recovering from the past upset.

Flint should work with its consultant and MDEQ to establish objective water quality and plant performance criteria. The plan must include operation of Flint's drinking water treatment plant for a reasonable period of time to treat KWA-supplied water until:

(1) the treated water meets finished water quality goals;
(2) the finished water quality is consistently maintained;
(3) potential plant operational and mechanical start-up issues are identified and addressed; and
(4) water plant operations staff are proficient in treating the new source.

<u>KWA water should not be distributed to the public until these conditions are satisfied.</u>

During this performance evaluation period, Flint must distribute to the public water from an alternate source. As water is already received from Detroit (Great Lakes Water Authority), that is an obvious and appropriate choice for that interim period. The length of the performance evaluation period will be dependent on the amount of time it takes for the treatment plant to consistently and reliably meet the performance criteria.

Because of similarities in source water and in treatment processes with Detroit's Huron plant, the Flint water plant will likely be configured to produce treated water with similar quality to that of the water currently being received from Detroit. Continued use of Detroit water during the performance evaluation period will minimize the risk of distribution system upsets.

We encourage Flint and the City's consultant to perform a number of assessments prior to the completion of the KWA pipeline and availability of the Lake Huron source water to expedite the plant transition period. For example, the planned bench-scale jar tests will be helpful in establishing full-scale treatment plant operating parameters. Assessment of corrosion control treatment using Detroit source water with lead pipe loop rigs in advance of switching to the KWA source may also be transferrable to the KWA source water. Pipe loops rigs operated during the performance assessment period will help predict whether lead release will be an issue when the new plant goes on line. EPA will work with the City to set up pipe loops at the Flint treatment plant.

CONTACT: Beth Stuever, stuever@anr.msu.edu or 269-274-1399

MSU Extension and Hurley Children's Hospital release recipe and nutrition resource guide to help people lessen harmful effects of lead

In the wake of growing concerns about exposure to and health impacts of lead in Flint, Michigan State University Extension and Hurley Children's Hospital have released a new nutrition booklet highlighting healthful, cost-effective meals that help lessen the harmful effects of lead. The booklet will be available beginning Saturday December 19, 12:30 p.m. at the Flint Farmers Market.

Joanna Sheill, a registered dietitian with Hurley Wellness Services will be facilitating a cooking demo featuring one of the booklet's recipes – a hearty egg burrito. Free water filters will also be available at the cooking demonstration, courtesy of the Genesee County Health Department.

"Healthy nutrition is one of the most important things we can do to protect our children from lead poisoning," said Dr. Mona Hanna-Attisha, director of the Pediatric Residency Program at Hurley Children's Hospital and MSU College of Human Medicine. "In collaboration with MSU Extension nutrition experts, we have developed this lead-fighting recipe and nutrition resource guide."

The booklets will be available during weekly cooking demonstrations at the Flint Farmers Market in early 2016 and also be distributed by MSU Extension nutrition instructors at free nutrition and cooking workshops and community events throughout Genesee County.

"We are delighted to provide this practical guide and recipe booklet to families to help prevent lead poisoning," said Dawn Contreras, MSU Extension's director of health and nutrition programs. "We want to protect our family members against the harmful effects of lead and an important way of doing that is through good nutrition."

The booklet features 10 healthful recipes that focus on low-cost ingredients, many of which people will likely already have in their pantries and cupboards. Recipes include chocolate strawberry French toast, vegetable lasagna and roasted butternut squash. Contact information for several food assistance programs and other resources in Genesee County, including Women Infants and Children (WIC), Supplemental Nutrition Assistance Program (SNAP) and Double Up Food Bucks is also listed in the booklet.

These programs help families throughout Michigan access healthy, nutritious and low-cost foods and are essential to helping Flint navigate through this challenging time, said Dr. Hanna-Attisha.

The recipes in the booklet are provided via the Share Our Strength Cooking Matters curricula, which MSU Extension delivers throughout Michigan to help people learn how to eat healthy, cook and grocery shop on a limited budget.

For more information about the nutrition booklet, please contact Dr. Mona Hanna-Attisha at mhanna1@hurleymc.com or MSU Extension Educator Erin Powell at powelle9@msu.edu or 810-244-

8536. MSU Extension also offers free nutrition classes in the Flint area, for more details visit msue.anr.msu.edu or call 810-244-8500.

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Governor Rick Snyder
October 2, 2015
Daily Briefing

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Flint Drinking Water Action Plan
Talking Points

Overall Messaging

- Repeated testing shows the water leaving Flint's drinking water system is safe to drink and meets all federal guidelines, including lead.
- After the switch the Flint River, the compliance testing protocol yielded results of 6 ppb in December 2014 and 11 ppb in June 2015. Both results were below the federal action level of 15 ppb.
- However, we recognize some residents experience higher levels of lead in the water that comes out of their faucets because of lead plumbing in the home, and that's a concern.
- Out of an abundance of caution, we want to address the needs of all Flint families, and so we have developed an action plan that includes both short- and long-term solutions.
- The state plan focuses on increasing water testing, offering additional precautions for families, and providing long-term solutions to address the city's water infrastructure.

Messaging regarding the action plan

The city and the state are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents.

- **Immediately test Flint public schools to ensure that drinking water is safe. Testing will also be available at no cost to any other school in Flint.**
  - Although Flint's drinking water meets all federal requirements, the state wants to take extra steps to ensure that drinking water is safe for the city's children.
  - The state will fund this testing (about $30,000) at no cost to the city or the local schools, and make the results publicly available.

- **Expand health exposure testing of individual residences.**
  - To double-check its data as well as provide residents with an additional layer of assurance, the DEQ will conduct more tests at Flint properties.
  - The Technical Advisory Committee will determine the scope of this expanded testing.

- **Offer water testing at no cost to Flint residents to assure water is safe.**
  - Although all testing indicates water in the city of Flint meets all federal standards, we understand some residents are concerned.
  - To ensure water in individual homes is safe, free water testing is available to all Flint residents.
  - We encourage anyone with a concern to get their water tested.
  - Contact the city water department to have your water tested.

- **Accelerate optimizing corrosion controls in the Flint drinking water system.**
  - A fully optimized corrosion control system can help coat the inside of pipes to minimize the amount of lead that enters the drinking water after it leaves the treatment plant.
  - This is a helpful step that can help minimize lead system-wide, and we're pleased the city is moving to take this step.
  - If asked: This was not initially required because a fully optimized corrosion control system is not federally required in many water systems. Even today, since Flint is meeting all federal standards, this fully optimized system is not required. However, to address public concerns and ensure every possible precaution is taken, the city is moving forward with installing this corrosion control system.

- **Expand the "Safe Drinking Water Technical Advisory Committee" to ensure the best technology, practices and science are being utilized, and add an expert from the EPA's Office of Research and Development to the group.**
    - The Safe Drinking Water Technical Advisory Committee will meet Oct. 7 to discuss fully optimizing the corrosion control system, expanding testing of at-risk properties, and other topics.
    - Tom Burke, the Deputy Assistant Administrator of EPA's Office of Research and Development as well as the EPA's Science Advisor, will participate on the committee. Prior to joining EPA, he held prominent positions at the Johns Hopkins Bloomberg School of Public Health and founded the Johns Hopkins Risk Sciences and Public Policy Institute. He brings substantial expertise, and we're pleased he is able join the committee.

- **Accelerate water system improvements to address replacement of lead service lines.**
    - Regardless of the drinking water source – whether it be DWSD, the Flint River or Lake Huron – the only permanent fix for lead is to replace all 18,000 of the private lead service lines in the city. These are the lines on private property that lead from the curb to individual homes.
    - This is a problem in communities statewide, and one we want to address with a long-term solution.
    - The state and EPA are working together to find a way for the city to access Drinking Water Revolving Loan funds for the work.

- **Expedite completion of Karegnondi Water Authority.**
    - The move to the Flint River was always a temporary measure until the connection to the KWA and to Lake Huron was completed.
    - This is the ultimate goal of the venture, and the state and locals will work together to speed up completion of the connection.
    -

- **Name Dr. Eden Wells as Flint Drinking Water Public Health Advisor.**
    - Dr. Wells is the Director for the Preventive Medicine Residency at the University of Michigan School of Public Health in Ann Arbor as well as the Chief Medical Executive for MDHHS.
    - She brings years of experience in epidemiology and preventative medicine to the issue, and we're thrilled to have her expertise.
    - Dr. Wells will coordinate with Hurley Medical Center to share data on blood lead levels in children, as well as address other emerging issues.

- **Provide water filters to residents of Flint.**
    - As an additional precaution, water filters will be available to low-income families.
    - This provides another safeguard to ensure everyone in the city of Flint has access to clean drinking water that they feel confident drinking.

- **Expand a comprehensive lead education initiative.**
    - Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.
    - It takes time for lead to accumulate in drinking water from plumbing, and so flushing your pipes prior to using them can minimize your exposure.

        - To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
        - In the city of Flint, running the water for 5 minutes only costs about 3-16 cents, depending on your faucet.
    - Additionally, more lead gets into hot water than cold water. Use only cold water for drinking, cooking and making baby formula.

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Expanding health exposure testing** of individual homes.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Accelerating an optimization of corrosion controls** in the Flint drinking water system.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- **Providing water filters** to residents with concerns or who are included in state assistance programs.
- Creating a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

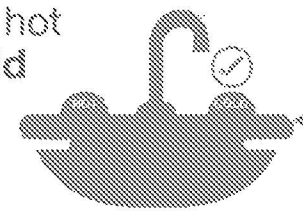
2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can minimize your exposure.

To flush your pipes, run the water until it is as cold as it will get. This can take as little as 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if your home has not used water in hours.

In the City of Flint, **running the water for 3 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit **www.mi.gov/FlintWater** for more information

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns

Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or connections might experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges. The plan was created at Snyder's direction by the Michigan Department of Environmental Quality, and the Department of Health and Human Services, the U.S. Environmental Protection Agency, and the City of Flint.

"People are worried about their health and their families, and they need to have accurate information and know that help is available," Snyder said. "Today's action plan builds upon ongoing work with state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents can feel safe and address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Expanding health exposure testing of individual homes.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Accelerating an optimization of corrosion controls in the Flint drinking water system.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Accelerating water system improvements to address replacing lead service lines.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.
- Providing water filters to residents with concerns or who are included in state assistance programs.

- Creating a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.
- Expediting the completion of the Karegnondi Water Authority pipeline.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. Additional information is available at www.michigan.gov/flintwater.
State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with water filters and educate families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, MDHHS is making National Sanitation Foundation certified water filters available to clients who are active Family Independence Program, Food Assistance Program, Child Development and Care or Social Security Insurance recipients.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

###

Oct. 1, 2015

Michigan leaders to announce action plan for Flint drinking water

Friday, Oct. 2 at 1:30 p.m.
Local, state and federal leaders will host a press conference to announce a comprehensive action plan for addressing drinking water concerns in Flint. Participants will include:

- Harvey Hollins, Director of the Office of Urban Initiatives for Gov. Rick Snyder
- Dan Wyant, Director for the Michigan Department of Environmental Quality
- Nick Lyon, Director for the Michigan Department of Health and Human Services
- Dr. Eden Wells, Chief Medical Executive for the Michigan Department of Health and Human Services
- Dayne Walling, Mayor of Flint
- Other local, state and federal officials

Location:
Kettering University, Innovation Center
1300 Bluff St.
Flint, MI 48504

This is a media event open to credentialed news media only. Media who plan to attend this event should RSVP by noon Friday. Contact Rosemarie Olszewski at 517-284-6700 or olszewskir@michigan.gov.

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

October 1, 2015

Senate Elections and Government Reform Committee
House Elections Committee

Dear Honorable Members:

Attached is a comprehensive report that covers the results of the Secretary of State's Administrative Audit of the City of Flint's Elections Operations. As you know, this audit and report are required by Public Act 43 of 2015, which allowed the City of Flint to move forward with a city primary on August 4, 2015. The report covers several categories, with findings and recommendations for each.

The Bureau of Elections continues to work closely with the City of Flint to prepare for the city general election scheduled for November 3, 2015. If you have questions or need additional information, please contact Christopher Thomas, Michigan Director of Elections. Thank you.

Sincerely,

Ruth A. Johnson
Secretary of State

Attachment

RICHARD H. AUSTIN BUILDING • 4TH FLOOR • 430 W. ALLEGAN • LANSING, MICHIGAN 48918

www.Michigan.gov/sos • (517) 373-2510

STATE OF MICHIGAN
RUTH JOHNSON, SECRETARY OF STATE
DEPARTMENT OF STATE
LANSING

FINDINGS AND RECOMMENDATIONS: ADMINISTRATIVE AUDIT OF THE CITY OF FLINT ELECTIONS OPERATIONS

October 2015

Background

Elections for the Mayor and select City Council positions in the City of Flint were scheduled to occur in 2015, with an August 4, 2015 primary and November 3, 2015 general election. In early 2015, the Flint City Clerk's office provided instructional packets to potential city office candidates which explained the filing deadline and process, along with other key steps related to the city election. Unfortunately, the information provided included an inaccurate candidate filing deadline. The mandated filing deadline for city offices in 2015 was 4:00 p.m. on April 21; the deadline published by the Clerk's office was 4:00 p.m. on April 28. The discrepancy was not discovered until after the April 21 deadline. Only one candidate filed timely by that deadline, and that filing was found to be insufficient, with petitions containing fewer than the required number of registered voter signatures. Several other candidates relied on the erroneous information and filed by the published April 28 deadline, but were unable to be certified for the ballot due to missing the true filing deadline. Due to these issues, the City of Flint was not scheduled to hold an August primary, and the only option for city office candidates would be to run as write-in candidates at the November 3, 2015 city general election.

As a result of this problem, the Michigan State legislature enacted Public Act 43 of 2015, which allowed the city nominating petition filing deadline in this case to be adjusted to the erroneously-published date. The law further established several other follow-up requirements, including the conduct of an administrative audit of the City Clerk's elections operations by the Secretary of State. This report summarizes the steps taken by the Secretary of State, Bureau of Elections (BOE) to conduct this administrative audit, including overall findings and recommendations.

Scope

On June 24, 2015, Bureau of Elections staff met with the Flint City Clerk and her staff to conduct the administrative audit. The meeting included detailed discussions and review of the city's election-related processes and materials, including:

- Staffing roles and responsibilities
- Candidate filings
- Utilization of State-issued training manuals, reference materials and communications

- Use of the Qualified Voter File (QVF) and Electronic Pollbook (EPB) programs
- Precinct and polling place structure
- Precinct Inspectors and training programs
- Absent Voter (AV) ballot issuance procedures and use of Absent Voter Counting Boards (AVCBs) on Election Day
- Election-related forms and supplies and Election Day precinct kit materials
- Use of Receiving Boards (RBs) on Election Day
- Prior election-related issues and problems

In addition, the Bureau of Elections worked collaboratively with the Clerk's office to plan for, attend and conduct several precinct inspector training sessions prior to the August 4, 2015 city primary. BOE staff also attended the Genesee County Board of Canvassers' meeting on August 5, 2015, where Flint's primary election results were certified.

Findings and Recommendations

The following information summarizes the Bureau of Elections' overall findings and recommendations with respect to the review of the City of Flint's elections operations:

Staffing

Staffing in the Flint City Clerk's elections division includes the Clerk and two full-time staff. A Deputy Clerk position was eliminated several years ago, leaving the Clerk to become solely responsible for the overall office organization and many of the day-to-day administrative duties. Three additional staff are available to assist during key election timeframes (prior to and up to Election Day). These staff members are shared with the city's business licensing area.

The full-time and shared staff all have several years of experience working in elections and have a good overall understanding of the key areas of election administration. The full-time staff are cross-trained to handle all major duties. The shared staff assist in conducting precinct inspector training, assisting walk-in customers during key election timeframes (e.g., absent voter ballot requests) and a variety of other duties to prepare for Election Day.

RECOMMENDATIONS - Staffing:

- Two full-time staff are insufficient to support elections in a municipality the size of Flint; The State strongly recommends that the City re-establish a Deputy Clerk position and, if possible, convert at least one of the shared staff positions to a full-time position, 100% assigned to election-related duties.
- If it is possible to add staff as recommended, the State recommends developing a more formal structure for specialty areas for assigned staff; especially with respect to training and communications.
- The re-establishment of a Deputy Clerk position would allow for additional focused improvements to be made in the overall organization of the office and additional delegation of administrative duties to staff; which, in turn would further improve the entire staff's ability to handle all required duties in a more proactive manner.

Candidate Filings

The Clerk's practice of preparing instructional packets for city office candidates is one that is practiced by many other municipalities. The content of these packets is obviously critical and should be informative, yet brief and easy to follow. The problem that occurred this year involved a single staff member that inaccurately calculated the filing deadline date – and the lack of review by others in the office of this critical piece of information. Flint's candidate packets for this year utilized appropriate petition forms, which were updated in early 2015. Flint staff review the packets with candidates as the packets are issued. Flint's procedure for processing candidate filings follows State guidelines and they appropriately utilize the QVF system for verifying petitions.

RECOMMENDATIONS – Candidate Filings:

- PA 43 of 2015 requires the City Clerk to submit city election filing information, calendars and petition forms for approval to the Secretary of State through the end of 2017.
- The City Clerk's office should establish and document the process for developing candidate information packets; in addition to the staff person that develops the information packet, procedures should include review by at least two other staff in the office.
- The Bureau of Elections regularly publishes *Key Dates and Deadlines* calendars for every election. These calendars are typically made available during the last quarter of the calendar year for the next upcoming election year. The developer of the city's candidate information packet should confirm key dates by referencing the BOE-published calendar. If candidate packets are prepared prior to the availability of the BOE calendars, Flint staff should confer with BOE and receive verification of the filing deadline in writing. Candidate packets should be kept as simple as possible.

QVF / Data Maintenance / AV Processing

QVF processing (including ongoing data maintenance) is handled by the two full-time permanent staff members. They appear to have an appropriate use and overall understanding of key voter registration and QVF processes. BOE staff reviewed the current status of Flint's portion of the State QVF and found that Flint appears to be conducting regular data maintenance (e.g., over 2,000 voters have been sent confirmation notices and are in the cancellation countdown process required by the National Voter Registration Act).

Absent Voter ballot processing: Flint does not utilize a permanent AV list. All staff (including shared staff) handle AV ballot requests and intake of voted AV ballots. Flint uses the QVF AV ballot tracker feature as required, which provides online updates to voters that AV ballots have been issued and received back from voters. It should be noted that Flint has continual issues with candidates and others submitting numerous AV applications, apparently in violation of State law. The Flint City Clerk regularly communicates with BOE on these issues and has developed a structured process for obtaining the identity of individuals submitting AV applications in bulk, reminding these individuals of the legal requirements and referring individuals to local law enforcement when there is evidence of possible law violations.

RECOMMENDATIONS – QVF / Data Maintenance / AV Processing:

- Processes appear sound.

- BOE will conduct a detailed review with Flint staff on all required data maintenance tasks (as we are doing with other jurisdictions).
- Flint should continue current practices with respect to handling suspected violations of AV ballot application requirements by certain individuals. Note that use of a Permanent AV list may assist with further ensuring the integrity of the AV application process.

Electronic Pollbook (EPB)

While Flint planned to begin using the EPB program in 2014, it had not implemented this program prior to August 2015. The State highly recommends use of the EPB program, as it has proven to be effective in speeding up processing on Election Day, reducing costs and increasing accuracy in assigning proper ballots to voters and recording voter history.

BOE recognizes that fully implementing EPB in a municipality the size of Flint is a large undertaking that must be approached carefully; specialized and targeted training is also required. BOE worked with Flint to pilot the EPB program in one precinct for the August primary. The program operated smoothly in that precinct.

RECOMMENDATIONS - EPB:

- BOE will continue to work with Flint on continued gradual expansion of the EPB program, which will include development of a detailed rollout and training plan for additional expansion in November 2015 and full EPB use city-wide in 2016.

Precincts / Polling Places

The City of Flint currently has 61 precincts. Although the structure seems to have been developed primarily to avoid the possibility of split precincts (e.g., in some elections, more than one ballot style would be required in a precinct with multiple county commissioner districts), the current structure is inefficient and contains several precincts with smaller than desired numbers. By law, an individual precinct can have no more than 2,999 active voters. For example, in Flint there is one precinct with 0 voters (apparently established because of a future planned residential development) and three precincts with less than 300 voters.

Flint's precinct structure is also challenging due to a State House split and unusually-constructed county commissioner district boundaries that conflict with City Ward boundaries. Of Flint's 26 polling locations, 19 house multiple precincts. Although temporary precinct consolidations are allowed in non-statewide elections, the Clerk and her staff are not in favor of changing the precinct structure temporarily in odd years due to the of steps needed to change the structure from year to year, and the possible need to communicate those changes to the city's voters in the odd year.

The City of Flint has also faced ongoing challenges due to the occasional closure of schools that also act as polling locations, creating an ongoing problem for the Clerk's office in finding and establishing new locations and communicating these changes to voters. Just this year, three schools that were previously polling places have closed.

RECOMMENDATIONS - Precincts / Polling Places:

- The Bureau of Elections recommends a significant effort toward permanently consolidating Flint's precincts. We have conducted an analysis of the current precinct structure and believe a model can be successfully pursued that would result in 40-45 precincts, as opposed to the current 61-precinct structure. Permanently consolidating precincts in many of the current polling locations that house multiple precincts is a logical step that should be easy to implement.
- Decreasing the number of precincts will help to alleviate problems with respect to having adequate numbers of pollworkers, equipment testing, AVCB processing timeframes and overall costs. Making these changes will entail additional training (and assignment of more experienced workers/chairpersons) in the few precincts that will now have occasional ballot splits. In addition, with implementation of the EPB city-wide, identification of the proper ballot style for each voter is simplified and easily identified by the program. The Bureau of Elections stands ready to assist the city in planning for and implementing these changes.
- BOE further recommends that the city consider temporary precinct consolidations in odd-year elections. Although employing a different precinct structure in the odd year will require changes to precinct kits and materials and a clear communication plan for voters, a step-by-step process template for implementing these changes can be developed that will allow for temporary consolidations in odd years to work smoothly. Use of temporary precinct consolidations in the odd year for city elections will also further cut costs and processing timeframes on Election Day.
- In the long-term (with the next redistricting cycle), BOE recommends that Genesee County consider changes to the current County Commission boundaries, to better coincide with the city's ward and precinct structure.

Polling Place Accessibility

Flint also faces challenges with respect to the accessibility of its current polling locations. Substantial Federal funding has been available since 2003 to cover the costs of needed structural improvements to polling places, to ensure full access to these facilities for voters with disabilities. Over the last few years, the city has come under the scrutiny of the U.S. Department of Justice because of complaints and concerns relating to polling place accessibility.

Prior to 2014, Flint utilized the available Federal grant program to complete improvements in only three polling locations. Starting in 2013, a dedicated BOE staff specialist provided direct assistance to Flint to assess polling locations, identify needed accessibility improvements and to develop and submit Federal grant funding requests to complete those identified changes. Due to these efforts, accessibility improvements have been completed in an additional 11 locations. Based on our assessments, there are still 11 additional locations that are in need of similar improvements.

While Federal grant funding has been available for several years, this program is reaching its end, and it is unlikely that these funds will be available to cover the costs of the remaining needed changes. Per Federal and State law, polling places must be fully accessible to voters

with disabilities, and Flint has an ongoing requirement to continue to identify needed changes and make these improvements, even if Federal funding is no longer available.

RECOMMENDATIONS - Polling Place Accessibility

- Flint must complete full accessibility assessments for any remaining polling location without a recent assessment on file (within the last five years). These assessments must be completed no later than March 2016.
- A plan must be developed to complete all identified needed changes in 2016. If Federal funding is no longer available, these plans must include plans for providing city funding.

Precinct Inspectors / Training / Precinct Materials

The training of precinct inspectors is critical to ensuring a smooth Election Day. Flint's pre-election training programs consist of numerous training sessions, and targeted training for specific groups (e.g., new election inspectors, experienced election inspectors, precinct chairpersons, Absent Voter Counting Board members and Receiving Board members). This is a logical approach to structuring training that is also used in other jurisdictions.

Over the past couple of years, the Clerk's office has begun to conduct detailed reviews and analyses after each election. These reviews occur precinct by precinct and identify Election Day mistakes and issues, including the inspectors/teams from each precinct. The Clerk has utilized this data to identify precinct teams that may need additional training or reassignment, or should be relieved of their duties. The data is also used to develop targeted training and hands-on sessions focusing on the topics that seem to be most problematic. These efforts are commended and should continue.

Prior to the August 4, 2015 Flint city primary, the Clerk's office scheduled 12 different training sessions. The sessions began in mid-July with an overall 'all workers' session that all inspectors were expected to attend. From there, the specialized group sessions began, with 2-3 sessions per group. All sessions generally followed a similar format, with both full group presentations and breakout sessions with hands-on exercises, focusing on a limited number of topics (typically, those issues most commonly identified by the post-election analyses, such as sealing ballot containers and completing end of night ballot summaries). BOE training staff attended these sessions and provided ongoing assistance and feedback to the Clerk throughout the process. At the final sessions that were conducted the week before Election Day, BOE training specialists also presented a structured session for each group that covered all key Election Day issues.

While the overall training schedule was established several weeks in advance of the primary, the format and structure for each individual training session was not planned extensively in advance. Several members of the Clerk's staff participated and presented at the various sessions, but the presentations generally consisted of a quick review of reminders, followed by break-out and hands-on type sessions that were more casual in nature. Decisions with respect to the overall training plan and the agenda/topics to be covered in each session seemed to be handled exclusively by the Clerk.

Flint has developed a series of job aids for their precinct inspectors, AVCB inspectors and Receiving Board members that provide step-by-step instructions covering each group's particular duties. The materials provided to the precinct inspectors include separate, color-coded instructions and reminders for opening the polls, closing the polls and delivery of precinct materials to the Receiving Board. These materials are well-structured for their purpose and seem to be well-used by the inspectors.

Flint continually struggles to recruit inspectors from both major political parties. The Clerk has increased her efforts to reach out to Republican Party officials in her area to obtain additional inspectors from this party to maintain the required political balance in each precinct.

RECOMMENDATIONS - Precinct Inspectors / Training / Precinct Materials:

- BOE supports the continued practice of conducting targeted training sessions for specialized groups (new inspectors, experienced inspectors, chairpersons, AVCB inspectors and Receiving Board members). As use of the Electronic Pollbook is further expanded, EPB inspectors should be added as a new specific training group.
- There was some confusion as to whether inspectors needed to attend a single training session or all identified sessions for their particular group. While it is reasonable to offer multiple training sessions for each group to allow for flexibility for inspectors' schedules, a specific agenda and topics should be developed for each session prior to the scheduled training, with clear direction to participants on which portions they need to attend.
- Attendance should be tracked, with follow-up for any non-attendees.
- The structure and format for each session should be established by the way of a standard reusable training template, utilizing a group presentation which includes a display (e.g., power point), handouts, and structured presentations by staff. BOE has provided template training presentations that can be utilized (and modified to meet Flint's specific needs) for new inspectors, experienced inspectors and chairpersons.
- All key Election Day processing steps should be regularly covered and reinforced - not just the most common problem issues. Exceptions and most commonly-missed items should also be highlighted, but in a structured presentation style – all that include time for group interaction and a question/answer period.
- Hands-on sessions should continue to be offered at the conclusion of the standard training presentations, as well as in a 'lab' or 'drop in' type mode currently offered by the Clerk's office.
- BOE strongly recommends that a dedicated staff person be established as a single point of contact in the office for training purposes. This person would be responsible for finalizing a reusable training template (for each specialized group), as well as the overall training schedule prior to each election and the specific training plans for each session. This resource would develop the full plan for each election cycle several weeks prior to the conduct of training – for approval by the Clerk.
- The Clerk should continue the practice of tracking specific types of problem issues that occur in each election, include reinforcement on those key points in subsequent training sessions and follow up with specific teams and inspectors as warranted.

- It should be noted that PA 43 of 2015 also requires the city's precinct inspectors to attend county-based training sessions in 2016 and 2017. BOE recommends that Flint continue to offer their regular targeted group training sessions in these years as well.
- The Clerk should continue to seek out and recruit inspectors that provide partisan balance (e.g., working with Republican Party officials in the area – even outside of Genesee County and/or at State level). The Clerk and her staff should also continue to seek out younger workers (e.g., high school and college students), who may be more adept at using the EPB program. The Clerk should also continue to mentor and encourage inspectors who show leadership potential to serve as precinct chairpersons in the future.

Absent Voter Counting Boards (AVCBs)

Over the past couple of years, the most notable problems in Flint's election process have involved the overall process and timeliness for completing Absent Voter Counting Board duties. AVCBs are used in many large jurisdictions to process all absent voter ballots in one location. The overall process and steps involved in completing Election Day tabulation in AVCBs are specialized and differ from in-person Election Day precincts.

Similar to the analysis conducted on Election Day precincts (mentioned above), Flint has similarly studied their AVCB operation and has recently made several positive structural changes. Earlier this year, Flint collaborated with other local clerks in the county to share AVCB best practices and develop a standardized model for AVCB processing. This was also a very positive step. Flint has used the new process in the past two elections which seems to have performed well, improved timeframes for completing AVCB processes on Election Night, and reduced incidences of problems.

RECOMMENDATIONS - Absent Voter Counting Boards (AVCBs):

- Flint should continue the use of the new countywide AVCB model and should continue the expansion of the number of teams employed to work in the AVCB. Flint should move towards the utilization of seven full AVCB teams, each working with one pollbook and tabulator. For the August 4 primary, only two teams were used, but in November, seven teams are planned. Use of additional AVCB teams will ensure more timely completion of AVCB duties on election night, but may also require additional training/support of additional inspectors that have not yet worked the new process.
- Flint should continue to use the countywide AVCB processing model, but should customize the instructions to create a Flint-specific training and instructional document for Flint's AVCB inspectors. Using this customized document, a Flint-specific AVCB training template and presentation should also be developed.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure more timely completion of the AVCB process in Flint, with fewer problems in completing and balancing each AVCB precinct.

Receiving Boards (RBs)

In recent years, some Election Day problems have occurred in Flint due to the inconsistent use of Receiving Boards. These boards, now mandated for use in every election, involve use of specialized precinct inspectors that receive materials from each precinct on Election Night,

confirm that ballot containers are properly sealed, and ensure that all materials are present and in balance and are delivered to the appropriate parties. These procedures prove to be very effective in ensuring a smooth canvass and election certification at the county level. In addition, the law mandates specific steps be used by Receiving Board inspectors, which cover all criteria used to declare a precinct recountable - therefore, greatly increasing the likelihood that all precincts can be recounted if necessary.

Over the past couple of years, Flint has developed a structured RB process, which includes a check-in table; 8-10, two-person RB teams; and a designated 'Problem Table' to focus in and resolve any precinct that appears to have problems. The RB training session included structured checklists, presentations by experienced RB members and sample materials with guidelines on precinct items that must be verified. This is a logical structure that seems to be working well.

The County Canvass process for the August 4 primary went very smoothly. One problem was identified (and resolved) that should have been caught by the RB teams, but the Canvassers reported that this past election was one of the best performed in recent memory.

RECOMMENDATIONS - Receiving Boards (RBs):

- Flint's revised RB process appears sound. This seems to be a well-working model that has helped to uncover and rectify problem issues while they can still be resolved. It is also appropriately used with the AVCB, which has been a main source of issues in the past.
- An overall lead worker should be assigned to oversee and study the Flint RB model, to help ensure that all problems are being identified and resolved and that the large number of precinct arrivals are moving fluidly through the system.
- Dedicated, experienced RB teams should be assigned to handle AVCB precincts as they arrive, to further ensure timely completion of the AVCB process and delivery to the county.
- Related to our earlier recommendations on precinct consolidation – it should also be noted that fewer precincts will ensure fewer problems in Flint's Receiving Boards.

Working Relationship with County

Although not a specific point of review within the administrative audit, it should be noted that a clear conflict exists between the Genesee County Clerk and Flint City Clerk. Both parties express a high level of frustration, resentment and distrust of the other – which is extremely unfortunate and counterproductive to running problem-free elections. While there are experienced and hard-working staff in both offices, this negative relationship between the Clerks poses extreme challenges to running any election smoothly in Flint. The election administration responsibilities between the County and City differ, but these two entities must work together in every election.

There have been a number of instances where critical comments were made via the local media, some even on Election Day. The Bureau of Elections strongly recommends that the Clerks refrain from these types of actions, allow their staff to work productively and professionally together, and to set their differences aside when it comes to completing the

necessary steps prior to the election, on Election Day and through each election's canvass and final election certification. The Bureau further recommends that the Clerks refrain from airing differences publicly.

Overall Summary, Conclusions & Next Steps

Although a number of problem issues have been uncovered after recent elections in Flint, the Flint City Clerk and her staff are dedicated to studying their operations and are working to eliminate the source of possible mistakes; a challenge in a large jurisdiction with a small staff and hundreds of precinct inspectors. Several strengths are present which can be built upon, including:

- An experienced core staff with a strong overall grasp of election-related procedures and requirements;
- Experienced precinct chairpersons and inspectors who share the Clerk's goal to ensure problem-free elections;
- Targeted training programs that reinforce issues that are identified in post-election analyses;
- Revised Absent Voter Counting Board processes which have incorporated best practices of other jurisdictions and has already proven to streamline Flint's overall AVCB operation; and
- A renewed focus on the importance of the Receiving Board process and the final checks on Election Day to ensure recountability and a smooth county canvass.

In any organization with large and complex responsibilities, opportunities for improvements exist. The Bureau of Elections recommends a structured plan of action for implementing the recommendations offered in this report, with a primary focus on:

- Securing additional full-time election staff and a Deputy Clerk in the City of Flint;
- Detailed evaluation and consolidation of the current precinct structure (decreasing the number of precincts);
- Completing accessibility improvements in all polling locations;
- Development of formal procedures for compiling and reviewing key information distributed by the Clerk's office (e.g., filing deadlines and candidate packets); as well as data maintenance tasks (a BOE focus statewide);
- Continued development of a formal, reusable training template, along with a dedicated staff resource for developing the training plan prior to every election; and
- Gradual expansion of the use of the Electronic Pollbook city-wide.

The Bureau of Elections will continue to work with the Flint City Clerk and her staff to assist with preparations for the city's November 3, 2015 general election, to fulfill the remaining requirements of PA 43 of 2015 and to assist with implementing (where possible) the recommendations presented in this report.

Governor Rick Snyder
April 19, 2013
Daily Briefing

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TO: Governor Snyder
CC: Dennis Muchmore, John Roberts, Harvey Hollins, Allison Scott

FROM: Bill Rustem

SUBJECT: Flint Water System

DATE: April 18, 2013

Governor, this information was compiled by the Department of Treasury.

Summary

In November 2012 the Department of Treasury commissioned the firm of Tucker, Young, Jackson & Tull, Inc. (TYJT) to analyze options for the City of Flint to either remain a customer of the Detroit Water & Sewer Department (DWSD) or to join the Karegnondi Water Authority (KWA) in Genesee County. The purpose of this study was to provide objective analyses to the State Treasurer and Flint's Emergency Financial Manager (EFM) in order to secure future potable drinking water for the City.

In December 2012, staff from TYJT met with representatives from the Department of Treasury and the City of Flint to provide a preliminary report on their findings. At this meeting, five options were presented: These options ranged from the Flint Water Plant providing 100% water, to 100% provision of untreated Lake Huron Water by KWA, to 100% provision of treated drinking water by DWSD, or provision of variable amounts of water from DWSD using a combination of blended DWSD water and Flint River water.

From the presentation of the preliminary report in December 2012 to the submission of the final report by TYJT in January 2013, a number of developments made arriving at a final decision very difficult.

- DWSD provided the City of Flint with at least two modified proposals to consider.
- A debate ensued between TYJT and KWA's principal engineering firm regarding the others' conclusions and estimates for construction of the KWA pipeline.
- The Flint EFM eliminated all options except the 100% DWSD option or joining KWA.

In January 2013, the Office of Financial Review (OFR) provided a comprehensive report to the State Treasurer analyzing three questions: 1) The projected construction costs and why Treasury believed the projections provided by Flint/KWA were acceptable; 2) Identification of the construction contingencies; and 3) Identification of the options Flint will utilize in the event of a construction cost overrun or a delay in construction. At the end of this report, the OFR recommended to the State Treasurer that KWA presented the best future option for future potable water. The OFR also concluded that KWA appeared to be the cheaper option; the quality of water would improve; Genesee County appeared willing to assist the City in securing the financing for their portion of the project; the KWA project could signify the beginning of better collaboration between the City of Flint and Genesee County; and the KWA project had both political and popular support.

Between January and April, intense scrutiny of the various proposals was undertaken by Treasury and Flint officials. Treasury officials met with officials from Genesee County to gain a better understanding of the KWA project. In February 2013, Genesee County opened bids for construction of the Lake Huron intakes. This bid opening represented the first meaningful step toward commencing construction of the KWA system. The bid was $3-million less than projected.

In March 2013, Treasury was notified that DWSD had contacted Flint to negotiate with the City to retain them as a customer. On April 12, 2013, the State Treasurer authorized the Flint EFM to join KWA, pending review of any final offer from DWSD. A final offer was received from DWSD on April 15, 2013.

DWSD's final offer provided two options. The first option was for a "supply only" rate schedule. Only water treatment costs would be recovered and DWDS would absorb all other delivery costs. Capital and operating revenue charges would be calculated based upon KWA's usage relative to the entire demand upon DWSD's Lake Huron WTP. KWA would also have the ability to construct and own its own transmission lines.

The second option was a "full service" rate option. DWSD would provide all production and transmission services. Transmission rates would be calculated only on those costs necessary to supply KWA and no additional transmission rates would be charged. Capital and operating revenue charges would be calculated based upon KWA's usage relative to the entire demand upon the Lake Huron WTP.

Independent analyses of DWSD's final offer by the OFR, the Flint EFM, and the Department of Environmental Quality (DEQ) generally reached the same conclusions:

- DWSD's offer was a framework subject to negotiations and was not a firm offer.
- The offer provided by DWSD was incomplete.
- DWSD's offer did not include a guaranteed rate beyond year one, nor did it limit maximum annual rate increases.
- The DWSD scenarios were based on 40 MGD of service capacity. However, the KWA project provides 60 MGD of initial capacity with potential expansion to 75 MGD.
- DWSD indicates that Flint/ Genesee County would be given "broadened representation," it is unclear exactly what this means in terms of actual control in the decision making processes.
- The DWSD offer relies on a single transmission system and would require the City of Flint to maintain its WTP for emergency purposes. In addition, it would leave Genesee County without an adequate backup supply to meet their needs.
- DWSD's offer included an attachment that listed the rank-ordered options (from cheapest to most expensive). DWSD Scenario 2 is listed as the least expensive option (but it is unclear how the total cost of this option was arrived at). DWSD Scenario 1 was not listed.
- DWSD provided a summary table of their unit costs but how these figures are arrived at was not clear, so analysis proved difficult.

Without specific details from DWSD on this proposal, a true comparative analysis is difficult to provide. As such the Flint EFM rejected the DWSD proposal and agreed to join KWA.

If further information on this issue is needed, please let me know.

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STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

ANDY DILLON
STATE TREASURER

SUMMARY REPORT

TO: Brom Stibitz, Senior Policy Advisor; Department of Treasury

FROM: Eric Cline. Unit Operations Specialist

SUBJECT: Flint Water System Summary

DATE: April 18, 2013

Summary

In November 2012 the Department of Treasury commissioned the firm of Tucker, Young, Jackson & Tull, Inc. (TYJT) to analyze options for the City of Flint to either remain a customer of the Detroit Water & Sewer Department (DWSD) or to join the Karegnondi Water Authority (KWA) in Genesee County. The purpose of this study was to provide objective analyses to the State Treasurer and Flint's Emergency Financial Manager (EFM) in order to secure future potable drinking water for the City.

In December 2012, staff from TYJT met with representatives from the Department of Treasury and the City of Flint to provide a preliminary report on their findings. At this meeting, five options were presented: These options ranged from the Flint Water Plant providing 100% water, to 100% provision of untreated Lake Huron Water by KWA, to 100% provision of treated drinking water by DWSD, or provision of variable amounts of water from DWSD using a combination of blended DWSD water and Flint River water.

From the presentation of the preliminary report in December 2012 to the submission of the final report by TYJT in January 2013, a number of developments made arriving at a final decision very difficult.

- DWSD provided the City of Flint with at least two modified proposals to consider.
- A debate ensued between TYJT and KWA's principal engineering firm regarding the others' conclusions and estimates for construction of the KWA pipeline.
- The Flint EFM eliminated all options except the 100% DWSD option or joining KWA.

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Copy: Roger Fraser, Deputy State Treasurer; Bureau of Local Government Services
Edward Koryzno, Administrator; Office of Fiscal Responsibility
Randall Byrne, State Administrative Manager; Office of Fiscal Responsibility

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